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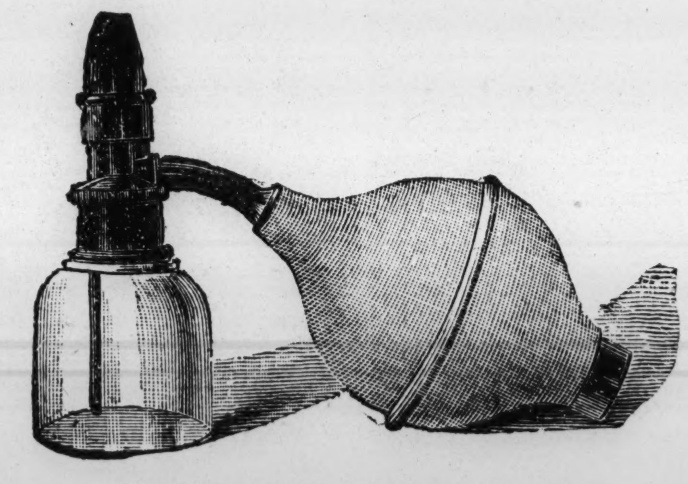

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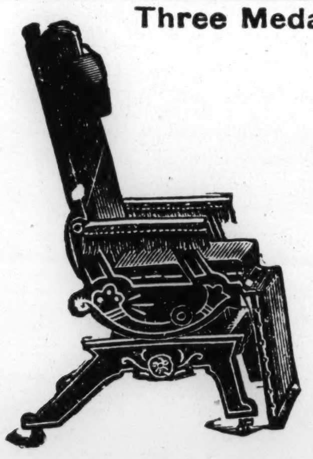

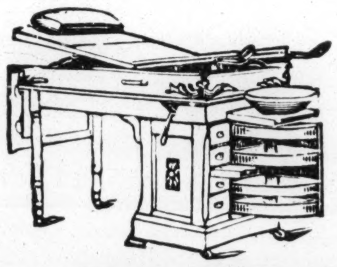

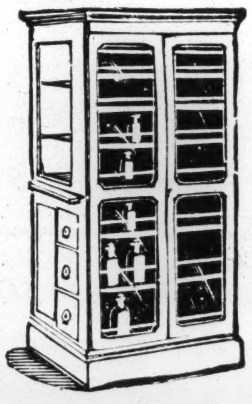

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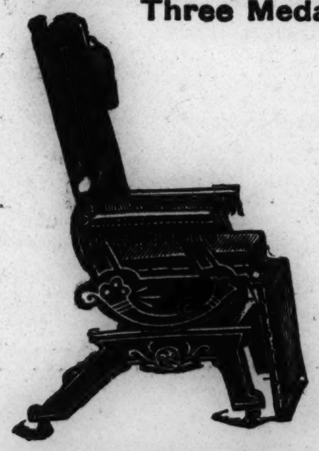

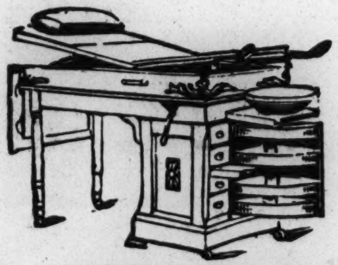

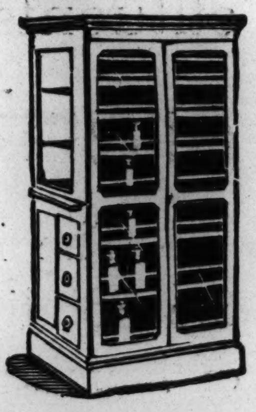

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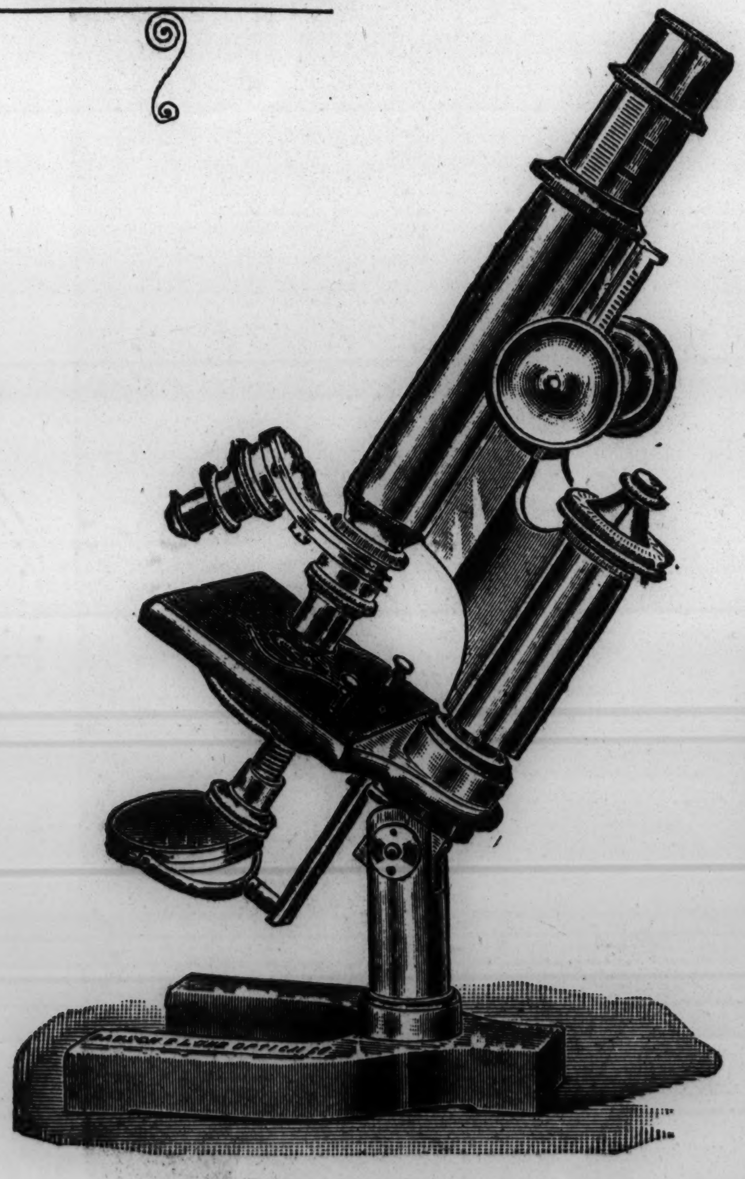

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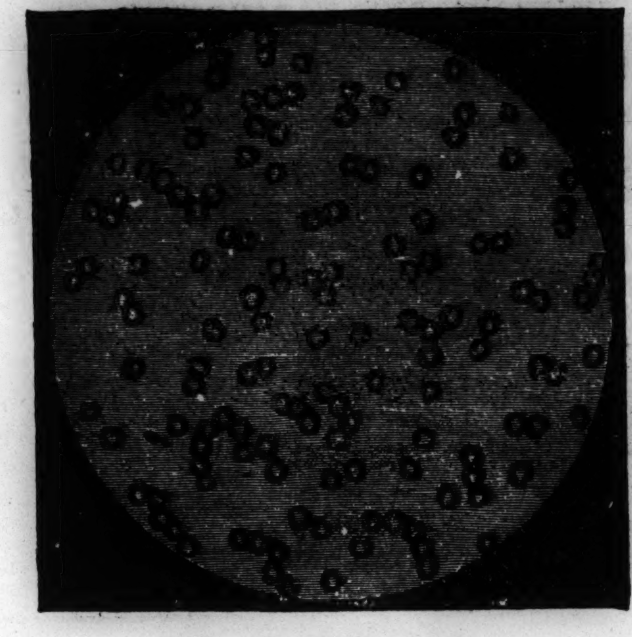

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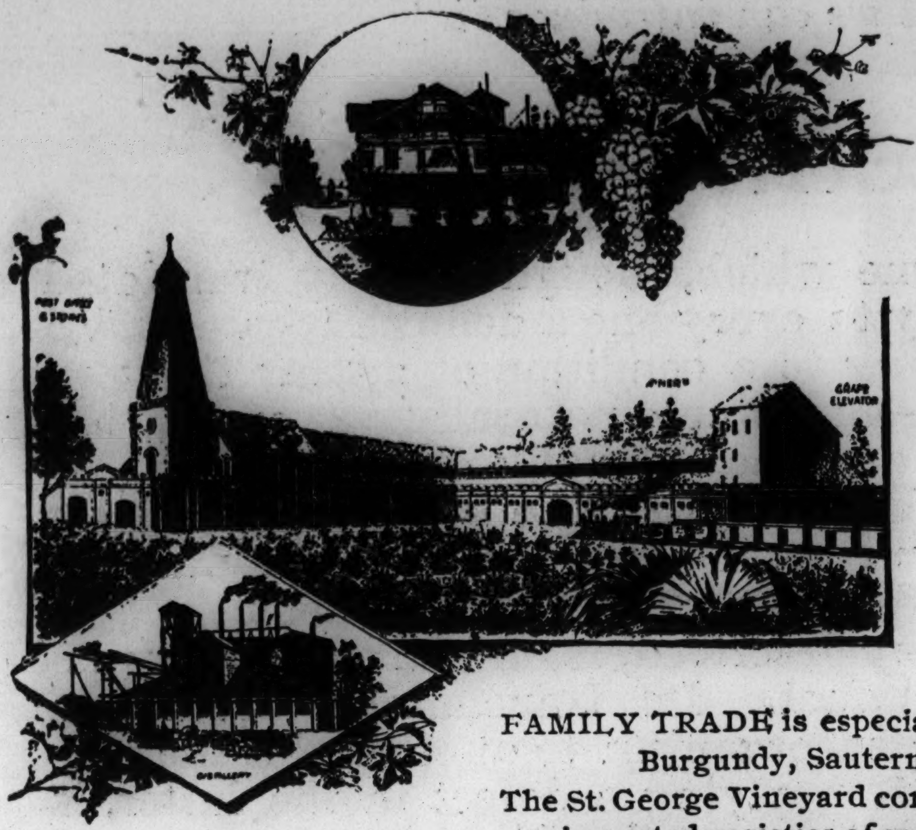

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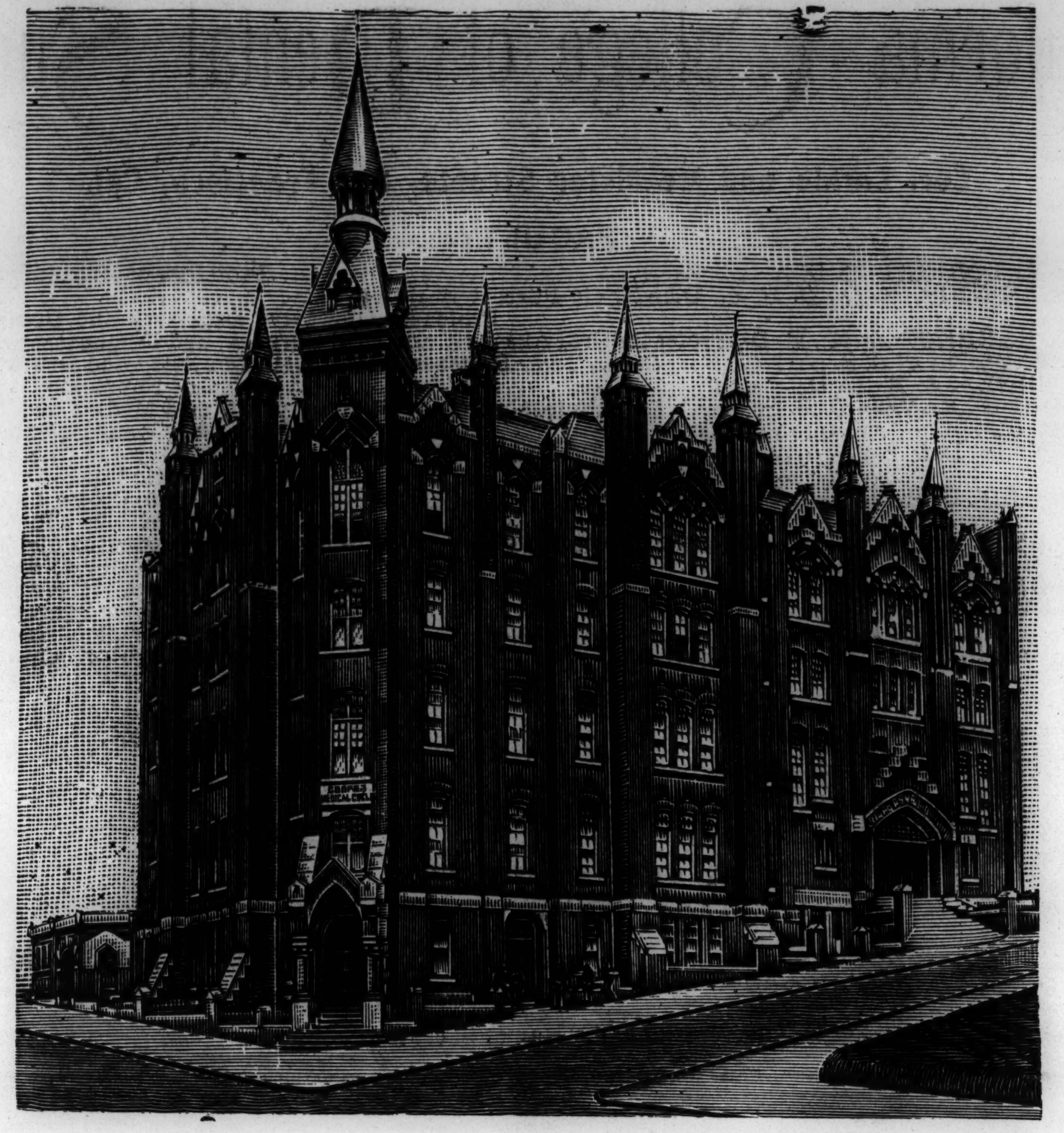

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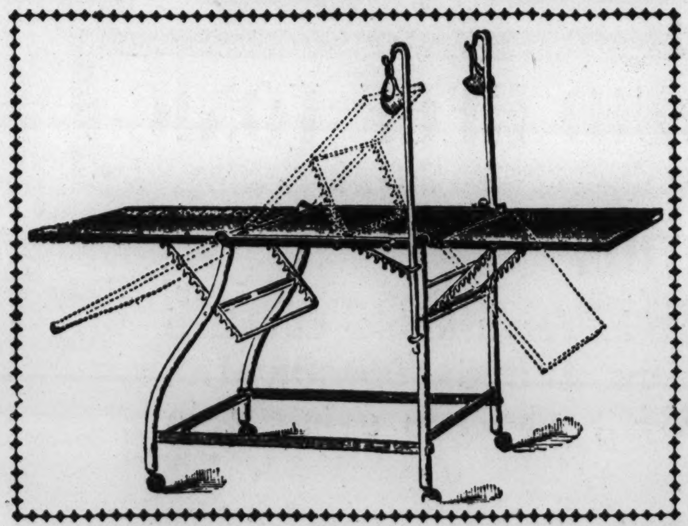

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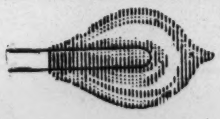

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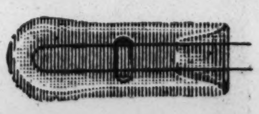

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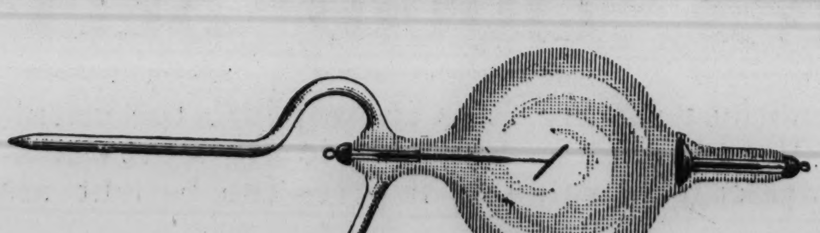

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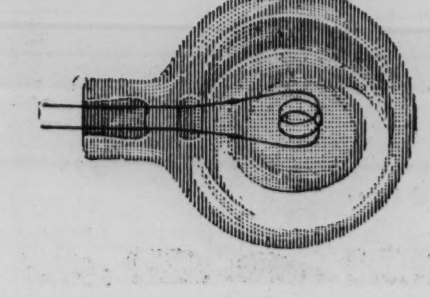

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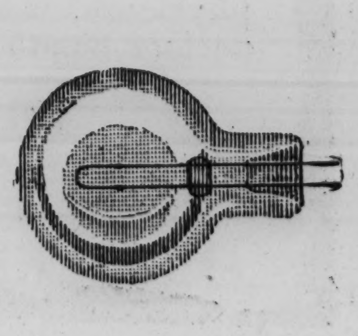

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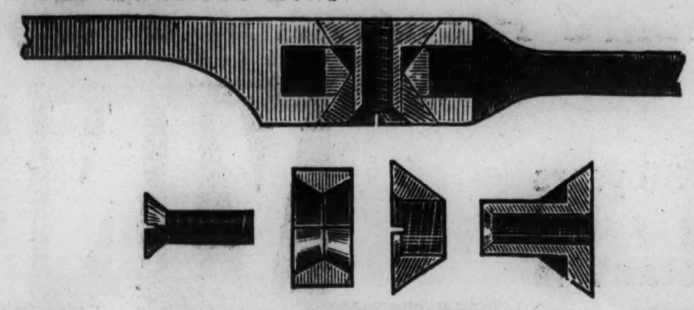

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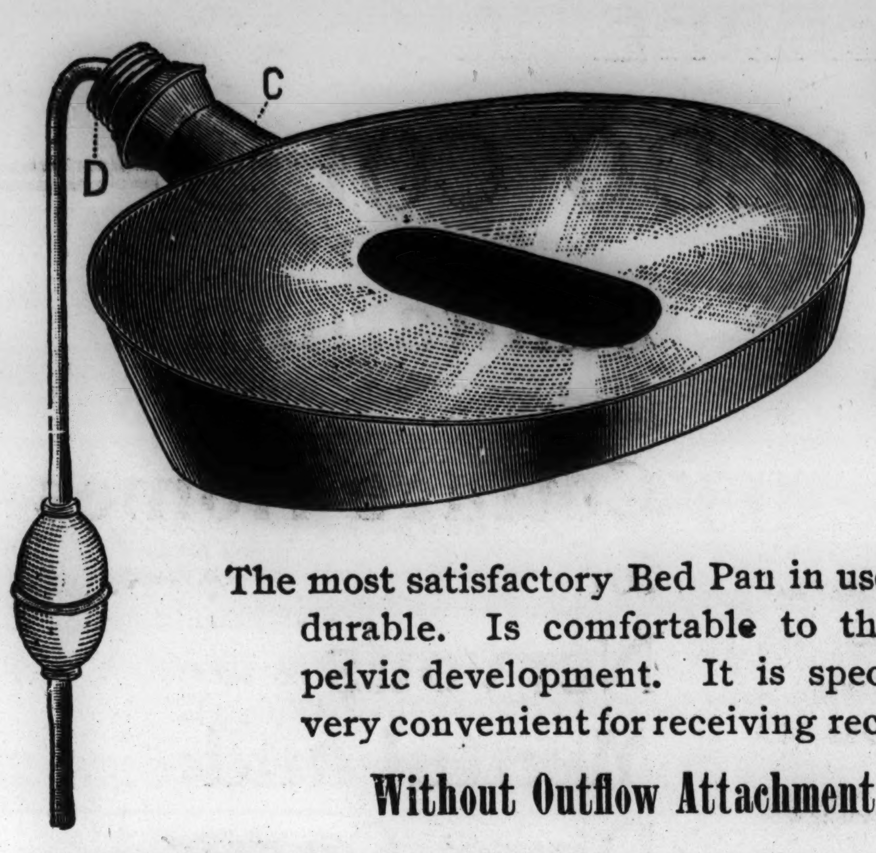

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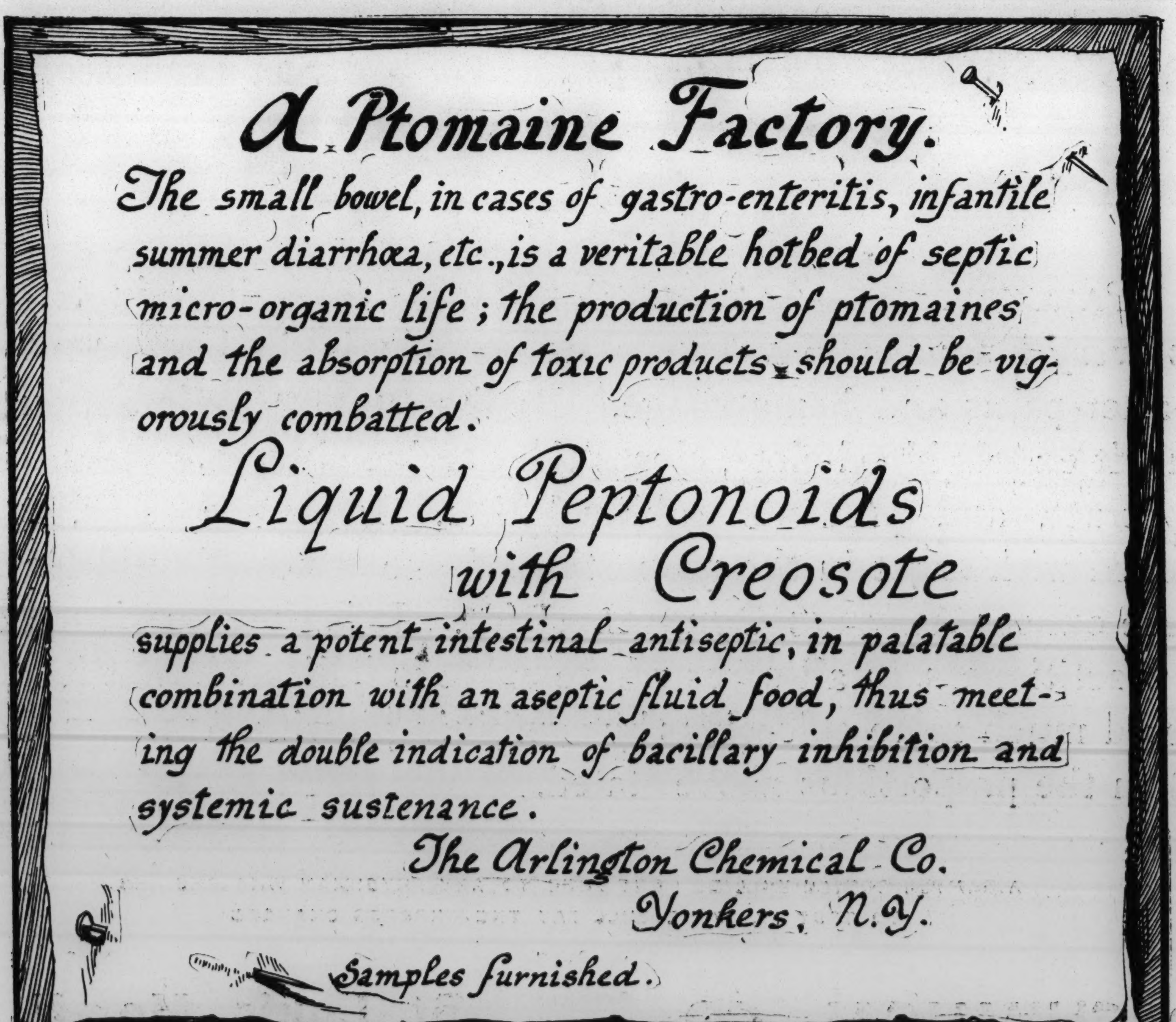

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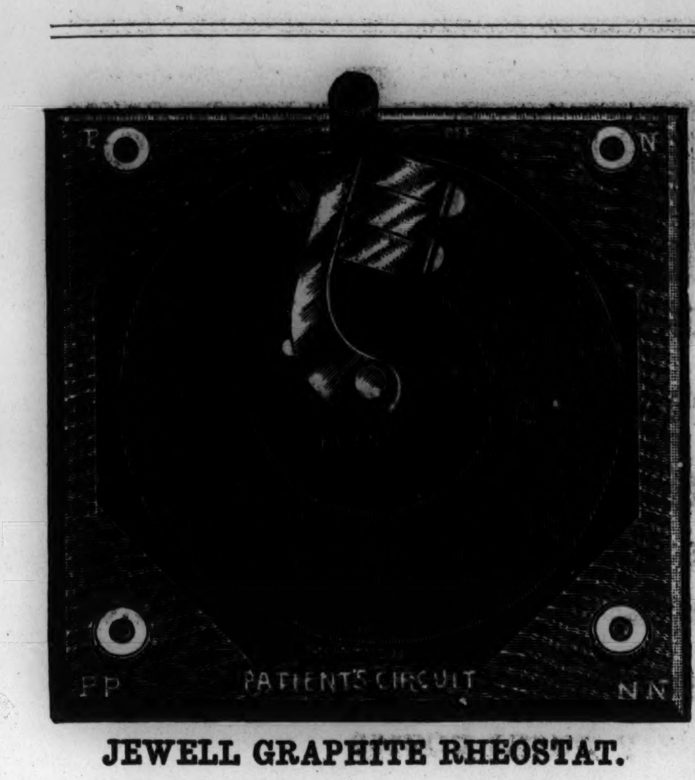

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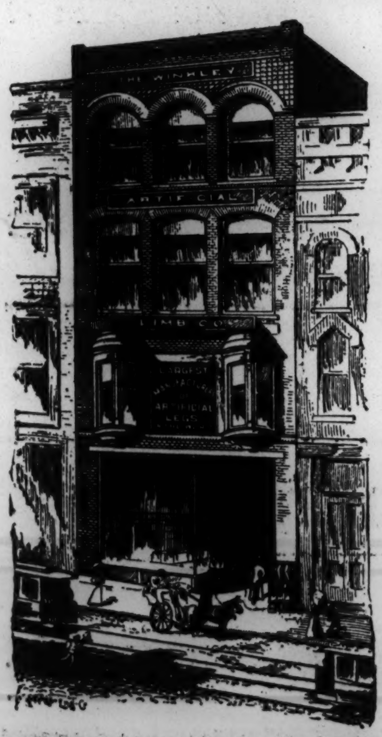

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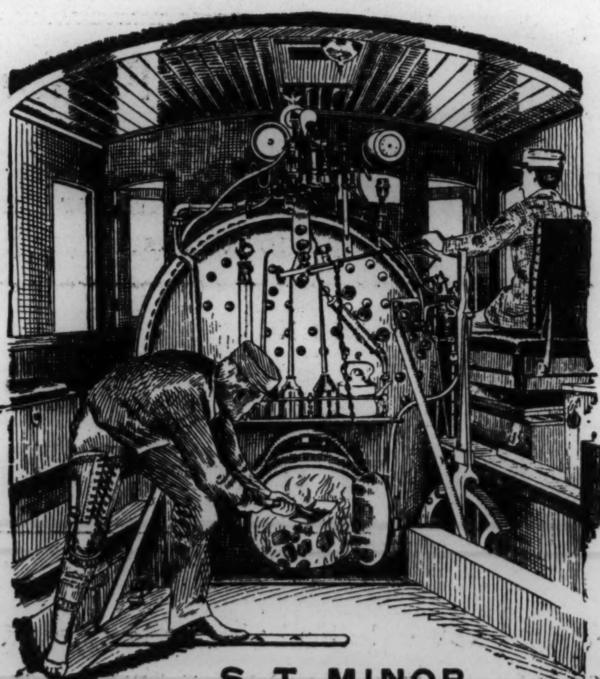

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Occidental Medical Times

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AN ADDRESS.

Commercialism in Medicine.

BY R. F. ROONEY, M. D.,

Delivered at the Semi-Annual Meeting of the California Northern District Medical Society.

Gentlemen:—I have chosen a subject for my semi-annual address that I would fain not take, but I feel the evil is becoming so great that it must be grappled with. And where else shall it be grappled with excepting in our medical societies, where the cure must be found, providing we can find one. In this paper I do not wish to appear as a scold, and if sometimes I seem to be such, it is rather the fault of my subject. Neither must you think I am in despair, if at times my words seem pitched in a pessimistic key.

The evils that exist in our ranks, can, and must be, cured by the influence of the medical society; hence the reason why I take this uncongenial theme. I believe it impossible to treat the disease by means of legislation. This means has been fruitlessly invoked in the past. We have laws now upon our statutes, which, if they could be enforced, would suppress many of the evils that I will mention, but we have not got the influence of the press with us, and without that we are powerless. And why have we not got it with us, when it boasts of always being on the side of right? Are we not right in trying to suppress quackery and commercialism in the practice of medicine? Most assuredly we are! Then why are we not supported by the press? The answer is to be found in any of the great dailies we take in our hands. Look any one of them over, and see the number of columns devoted to medical advertising. They will never average less than two columns, and often whole pages. With the nature of these advertisements you are all familiar.

They consist of the quack's announcements of special skill in all the ills that flesh is heir to; the wonderful cures effected at some medical institute; the all-powerful control over life and death of an Osteopath; the skill of a Christian Scientist, Clairvoyant, Electrical Healer, or any other designation that may serve to catch and attract the eyes of the simple and ignorant, and secure their dollars. Such things as these, together with such advertisements as those vaunting the power of Miss Lydia Pinkham's remedies, Williams' Pink Pills for pale people, *et id omne genus*, fill the columns of the papers, and the purses of their proprietors. And this is not the worst of it; as they insert the covert announcements of the professional abortionists' trade. These are not always so covert as they might be, as they are so openly worded that he who runs may read. Now, although the press vaunts its incorruptibility in high-sounding words, it is very susceptible to the influence of the almighty dollar, and does not want to see this prolific source of income cut off. Newspapers, with a few honorable exceptions, invariably side with the scoundrels. Hence it is that we can always count on the opposition of the press in our efforts to suppress quackery.

The code of ethics makes very beautiful reading, and if lived up to by all, would make the practice of medicine a delight and a joy. But unfortunately it is too often disregarded, and I sometimes think we would be better without it. What is the code? It is but the codification of the laws that are natural to every gentleman, and if a man is not that by nature, the code will not make him one. Why not discard it entirely, and let the medical advertiser have free rein? The disease would then perfect its own cure. Where so many advertised, the public would soon pay little attention to any of them, and it would resolve itself into the plain question of the survival of the fittest. As it stands, the gentleman has the worst of it at the start, and even in the end, talent and honesty do not always win, although they generally do. It is the beginning of a man's career that constitutes the critical period. He starts out in life determined to be a gentleman in his profession, as his instincts and education have taught him to be in all things else; and to win his way to success by merit and honest endeavor. Early in his career he gets a prominent person as a patient, who is quite seriously ill; the young practitioner becomes somewhat anxious, or perhaps it is the patient or his friends, and a consultation is decided upon. An older and more experienced man is called in as consultant; perhaps one of the younger man's own college professors. The young man finds himself discredited, more by what is not said, than by what is, and promptly finds himself dismissed, and the other man installed in his place. It depends upon the fineness of his fiber whether or not he is spoiled by the experience. This is no fancy picture; I knew of just such a case occurring to a young medical friend of my own, and it made him sour and suspicious for years. Even if the experience does not come to himself, he sees similar things happening within his knowledge, what can the influence upon his future be? Unquestionably it is demoralizing, to say the least.

There are to-day, everywhere we look, talented but unscrupulous men, who, by their example, are demoralizing the young men of the profession who come in contact with them. They who should be shining lights, to beckon young men on to higher and better things, are dragging them deeper into the moral morass of predaceous practice, by the phosphorescent gleams begotten by their own rottenness and corruption. As a prominent politician once said of his opponent, "he stinks and shines, and shines and stinks, like a rotten shad by moonlight."

Many and various are the devices of some men to keep within the pale of the code, and yet obtain all the advantage of free advertising. They will offer a large share, or perhaps the whole, of a consulting fee to the regular attendant, for the honor of being called in as a consultant. They employ their cappers and steerers on a percentage. They cultivate acquaintances amongst newspaper men, with the view of being interviewed, and thus get their names exploited in connection with questions of the hour. And when all else fails, they seek a sufficient number of their own stripe—and found a new college of medicine. The profession is becoming so debauched by such practices that I recently saw it gravely discussed in a medical journal of standing, to whether it was right for a consulting specialist to hand over a large part of his fee to the family attendant. How could such a thing be, without injury to all three parties concerned—the patient first, and then the regular attendant and the consultant?

Let us, for an instant, look at the tendency of such a practice! It is no doubt trying at times to the regular attendant, to see a specialist called in who receives more for one consultation, both in fees and honor, than he gets for weeks of conscientious attendance. But, if both are gentlemen, this is never thought of; as the family physician knows that the loss to himself is due to his want of the necessary special skill which he cannot supply, and the consultant will charge no more than is just and right, and will treat the former with every courtesy. But if the fee is divided, the temptation to the attendant, if he is not a gentleman, or even if he is and he be poor, is to call in an inexperienced or inferior man, who, either for the experience to be gained, or the prominence it may give, will be willing to surrender a great part, or even the whole of the fee to the attendant. Gentlemen, be honest and honorable, if the Heavens should fall! Let us look to the welfare of our patient first, and then to our own.

Again we see the spirit of commercialism showing itself in the increasing number of men who devise new instruments—and patent them! or new modes of treatment, and keep them secret. Oh, shades of Jenner, how your long-faded cheeks would glow with shame for your loved profession, could you see the act of such degenerates to-day! Medical ethics are based on the principle that medicine is a profession and not a trade, and by them it is forbidden the professional man to sell, or to reserve to himself, by concealment or patent right, any discovery in medicine or surgery, that he may have made or acquired. On the contrary, every medical man is bound by professional honor and philanthropy, to give freely to the profession, according to his ability and opportunity, every discovery he may make, which in his judgment, may prove of service to his brethren in the alleviation of human suffering. What honor would we pay to-day to the names of Morton or Simpson, had they patented ether and chloroform as anesthetics, and such prices charged as to make them unavailable to any but the very rich? Is it not for the purpose of free, disinterested and philanthropic dissemination of medical truth, that associations, schools, hospitals, boards of health, and all other depositories of medical knowledge exists? And yet, we see leading—save the mark—professors patenting devices for professional use, and compounding secret—or semi-secret—remedies, under the commercial plea that "a man has a right to profit by the creations of his own brain."

Again commercialism gains its opportunity when some new fad in medicine comes along. He who jumps into the fad first, makes half-baked experiments, and rushes into print with the results, and succeeds in getting them quoted in the public press, has made a "scoop" on his professional brethren. No matter if the fad is discredited within a month, his purpose has been effected—he has gained notoriety, which is the desire of his heart. Some men, more shameless than others; amongst them college professors, write articles for the public press describing surgical operations; *vide* The *Examiner* of February 6th of the present year. Almost any Sunday issue of that paper that you may pick up contains something written by a medical man upon professional subjects, in fact, that paper is running some of the professional journals a close second. Even our very medical societies themselves, are not free from the advertising spirit. When fifty or more patients are paraded before a society as living examples of the efficacy of a special treatment, devised by the exhibitor himself, it only needs a brass band and a torchlight procession, to complete the circus-like effect. I fully expect to see, before I die, the employment of sandwich men to advertise some special system of medical treatment.

Next comes the man with a new theory! This, if well worked up, is a source of unlimited free advertising. The more absurd the theory the greater the amount of advertising received. A man who devises a new mode of procreation, or, parturition made easy, nas struck a "lead" (as our mining friends here would say), that, if properly worked, will yield unlimited coin and notoriety.

Of course, if all else fail, as I said before, a few men of similar spirit can always found a college. Will any of you please tell me any reason for the existence of four colleges in the State of California for the education of students in regular medicine? Surely the second, the third and the fourth were founded with rapidly lessening excuse for their being, when we consider the restricted demand for the material yearly ground out by these numerous educational bodies. Can all these medical fledglings live by their chosen profession, and remain honest and honorable men? Why, the day is fast approaching when competition will be so keen that a gravid uterus will be mobbed upon the street by hungry doctors, clamoring for a job.

When the college racket has been worked to its utmost limit, there remains the Polyclinic, which if properly exploited by industrious men, can be made the source of much advertising, and, incidentally, money!

There remains many more plans, for judicious advertising, that I will have to leave unnoticed. A few of these I will merely mention: Free dispensaries; private hospitals; sanitariums; homes for the cure of the opium or liquor habit; medical institutes; all these are open to the enterprising. The young doctor is crowded, and instead of waiting for the normal development of his practice, and perhaps incited by the unworthy example of some of his teachers, he starts off wrong, and gets into devious trails that lead him into the high road of dishonor.

And lastly, commercialism shows up in the multiplication of specialties. A man fails in general practice, disappears for three months, and turns up somewhere a full-fledged specialist hoping that at last he is on the royal road to fame and fortune. This specialty business is being as greatly over-worked at the present day, as are the colleges. We have specialists for the brain and nervous system; for the eye; for the ear; for the nose and throat; for the lungs and heart; for liver and bowel affections; for the kidneys and bladder; for the appendix vermiformis; for genital diseases; for rectal diseases; for the uterus; for the skin; for deformities; for pedriatrics; and at present the lowest, and perhaps the last, the chiropodist. This is specialism run to seed. These specialists charge the public special fees for performing trivial operations that the honest general practitioner would hardly think worthy of charge. For instance, a man gets a cinder in his eye, and goes to the specialist to have it removed, and pays twenty dollars for the operation? The general practitioner is hailed on the corner of the street, takes out his handkerchief, and with its folds deftly removes the offending particle, and goes on his way without thought of fee or reward. Even the honest specialist gets to be more or less dangerous, because his mind becomes warped from looking at every ailment from one point of view. Then what can we expect of specialism without honesty, when spurred on by the spirit of commercialism of the present day?

What I have said applies more particularly to the profession in the large cities, but in a degree, it exists everywhere. I believe there is a higher standard of ability and honor out of, than in the cities. In the city a man must have money, or he is a nonentity. In the country it makes but little difference; he will be esteemed and trusted without it. In the city a rough tweed suit, and a last year's style of hat, can never command confidence; in the country it matters not, if his mind be well clothed. The cities are too artificial, and too prone to accept a man for what he looks to be. The country is more discerning, because it has more time; cares more for what a man is, than for the cut of his coat, or the style of his carriage and horses.

And now, having described the disease, what is the remedy? In the first place, before entering on this part of my subject, let me say that I am a firm believer in the innate good of human nature. I believe that an overwhelming majority of all men will be honest and just, if they are at all encouraged in it. With this premise, I believe we can find a remedy. What is it? It is the medical society. If you have not got a county society, organize one, join it, take an interest in it, and, above all, attend its meetings!

Join the district society, in which ever district you live. Then come into the State Society, and help it along, and mix with your medical brethren on all occasions. You will find no man altogether bad, no matter what his reputation may be, and if you can get a doctor, who is a little off color, to join the society, you have a hold upon him which will probably work out his salvation. But, first and foremost, get into the county society yourself; live up to its laws; and the standing of the rank and file of the profession will be constantly raised. Get acquainted with all your medical neighbors, and treat them well; you will find that they will be influenced by your conduct, and that few of them will take any advantage of you. If your numbers are too small to form a county society, join the district society.

Doctors lead busy lives, and as a rule, seldom meet socially; as they mostly belong to different churches, organizations, and political parties; and the medical society is about the only place where they can meet upon the same level, and with a common subject of interest. Here all differences can be laid aside, and all can meet as brothers; interested in one subject, and one cause. Doctors in the same town, or in the same neighborhood, are often incensed against each other without just cause, owing to the efforts of gossips and talebearers, who never miss the opportunity of enlarging on any story that may be started. At the society meetings many a feeling of jealousy or animosity, is readily adjusted, and a few moments conversation may make friends out of enemies. I believe that the most of our differences arise from misunderstandings, generally caused by some of our friends misquoting our words.

Join a society at once after leaving college, because to the young man more especially, the medical society is of great benefit. It sharpens his intellect; keeps him up to his very best; and helps his standing, both in his profession, and in the community. The general standard of the profession is raised by the society, in that it keeps all its members trying to live up to it. Many a man is saved from doing a shady thing, by fear of losing his standing in his society. On the other hand, if a member tries to make capital out of his membership, and stoops to ungentlemanly conduct expel him.

To receive the greatest benefit from your society, write papers for it, the writer always receives more benefit from his paper than any one else. Always remember the golden rule when listening to papers; give them the same kind attention that you would like your own efforts to receive. If you feel disappointed at a small attendance when you read, remember that the same thing holds true when another man is reading; hence it is your duty to be present, if possible, at every meeting, and give its sessions your steady and close attention. When papers are read, a full and free discussion adds to their interest, and to your profit. Then, when you get to feel at home amongst your local brethren, go to the State society, and bear a part in that body, and help keep it free from the spirit of commercialism that, more than once to my own knowledge, has invaded it.

In conclusion let me say, that competition in medicine, as in all other professions and walks of life, becomes keener and keener, and yearly the struggle for existence becomes harder. The survival of the fittest is inevitable, and the incompetent and idle will be left behind. The Medical Society is the one powerful means of keeping ourselves in the front rank of our chosen profession. Support it enthusiastically, attend it regularly, and you have a Post-Graduate School always in session, and of inestimable value to you in every way.

TWO CASES OF SPONTANEOUS RUPTURE OF THE HEART, WITH DEMONSTRATIONS OF SPECIMENS.

BY A. W. HOISHOLT, M. D.,
Assistant Physician, State Asylum for Insane, Stockton, Cal.

Read before the California Northern District Medical Society.

Spontaneous rupture of the heart does not appear to be so frequently met with in cases of sudden death as is generally believed; disease of the coronary arteries without rupture being a much more frequent cause, and one which is generally overlooked in post-mortem examinations, in which the findings have been sudden death without apparent cause. Meyer[1] quotes from an examination of the results of autopsies made at the Munich Pathological Institute from 1854 to 1889, that of the total number made (12,000 to 13,000) there were only 7 cases of spontaneous rupture. He found 25 cases recorded in literature since 1870, and was able to add 9 other cases. Nebolionhoff[2] states that among one thousand medico-legal autopsies made at the faculty of Kasan, there was only one case of spontaneous heart-rupture. During the years 1894 and 1895 twelve cases were reported by various English, American, German, French and Russian writers.

Spontaneous rupture of the heart is always preceded by changes in the muscular fibers which have led to a diminution in their firmness and elasticity. Formerly it was reported as also occurring in a perfectly sound heart muscle, and even now and then in recent years such reports are met with. Thus Vincent Griffon[3] reports a case as occurring in a macroscopically healthy heart. While it is true that, in cases of sudden death from coronary disease without heart rupture, one cannot anatomically, as Strümpell[4] says, determine with certainty whether a heart muscle had been capable of performing its normal function or not; in cases of heart-rupture one is justified in doubting a finding, such as Griffon reports, when not based upon a microscopical as well as a macroscopical examination.

The two most common causes are fibroid myocarditis or cardiac fibrosis and fatty degeneration, in each of which the rupture may or may not be preceded by the formation of a heart aneurism; but rupture may also occur in ulcerative endocarditis when mural and leading to the formation of an abscess, and in very rare cases it has been caused by echinococcus cysts and new formations. Thus Meyer reports a case of the former and Pitt[5] describes a case in a man 28 years of age in whom a gummatous mass at the apex of the left ventricle had yielded and formed an aneurism, which had ruptured into the pericardial sac. Fibrous myocarditis is not really an inflammation, although it would appear judging by the presence of dried-up caseous and calcareous remnants of pus sometimes seen, that it may follow an acute myocarditis, the fibrous or cicatricial tissue simply taking the place of the previously degenerated muscular tissue, which has been absorbed.

While generally speaking the fibroid heart is said to be more frequently met with at post-mortem examinations than the fatty heart,[6] the latter more often leads to rupture. According to Quain, who collected 83 cases of death from fatty degeneration of the heart, rupture occurred in 28 or in 37 per cent of the cases. In the fibroid and fatty heart disease of the coronary arteries is nearly always present, and since of late years the condition of these arteries has been more carefully examined, no reports have been made of rupture due to fatty infiltration, as stated, not connected with coronary disease.

Fibrous myocarditis is said by most authors to be exclusively due to the disease of the coronary arteries, but W. T. Councilman, in an excellent paper on[7] "Sudden Death due to the Heart," reports having observed a case at the Johns Hopkins Hospital in which a marked fibrous myocarditis was a result of an extension of pericardial inflammation, in a syphilitic subject without disease of the coronary arteries. The direct etiological factors of arteriosclerosis of the coronary arteries with the resulting condition of fibrous myocarditis and fatty degeneration are in most cases as unknown as the causes of arteriosclerosis in general. Chronic alcoholism and gourmandism are usualy among the first mentioned of predisposing causes.

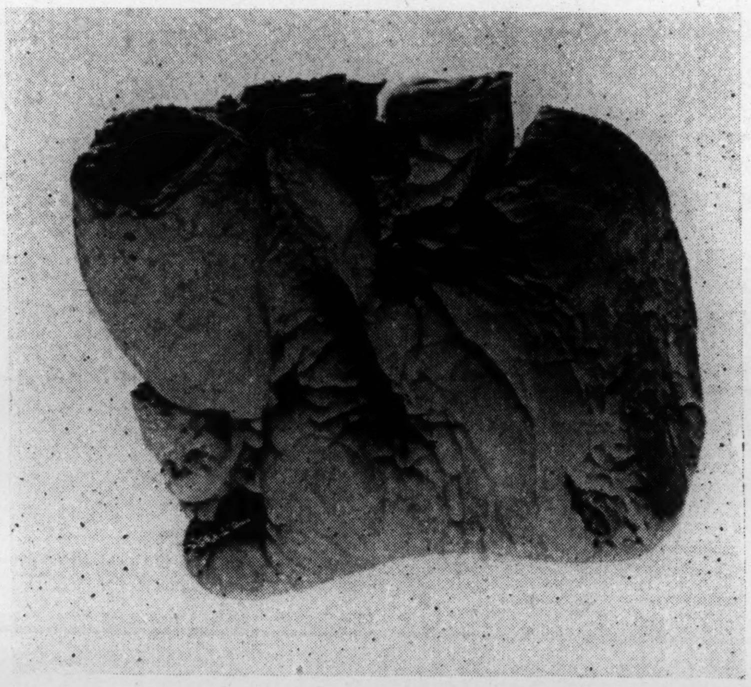
The most frequent seat of rupture in the fibroid and fatty heart is the left ventricle, and especially in the anterior wall near the apex; next in frequency comes the right ventricle, then septum ventriculorum, the right auricle, and least frequently it is found in the left auricle. Usually there is only one tear to be found, which may, however, divide in different directions, but cases have been reported by Andral, Barclay and Paget, in which several distinct tears have been found in the same heart. The perforating tear is seldom more than 1 cm. in length, and as it follows the direction of the muscular fibers, it is not always straight, but is frequently a fistulous passage. The blood generally flows into the pericardial sac, but in rare cases of heart aneurism, where there has been occlusion of the pericardial cavity by adhesion, it has entered the pleural cavity or even one of the large blood vessels.

The amount of the hemorrhage varies greatly. In some cases it has been small as in the case reported by J. A. Tanner,[8] of Dorchester, in which no free blood, but only a little reddish fluid was found in the pericardial sac; in other cases the blood has distended the latter to its full capacity. There has been much discussion as to the phases of the cardiac activity during which rupture is apt to take place. Wunderlich has claimed that it is most apt to occur at a time when the intracardiac pressure is the greatest, which is at the time of the beginning of the systole. Death is sometimes instantaneous and usually occurs within a few hours, but in exceptional cases the patient may last several days, as in the cases reported by Professor Peter, of Paris,[9] in which death ensued on the twelfth day after perforation. The direct causes have been variously estimated. While there can be no doubt, that death results in cases of sudden and copious hemorrhage into the pericardial cavity from paralysis due to the interference with the heart's motion from cerebral anemia, there are other cases, as in the one reported by Tanner, where the hemorrhage is too slight to do this, and where disturbances in the innervation, or a nerve shock, are more apt to have been the cause.

Spontaneous heart rupture is more common among men than among women, probably because the former are more subject to diseases of the blood vessels; it is more apt to occur late in life because arteriosclerosis is more frequently met with at this age. While it is generally found to be connected with a previous physical or mental excitement, it may also take place during perfect rest, as in the midst of quiet slumber.

As has been previously stated, death is not always instantaneous, patients in some cases having lived for days, which has led to discussions of possibilities of cure by surgical intervention or other means, thus Chiperovitch, of St. Petersburg,[10] who reports four cases following acute infectious diseases, in one of which a young man 36 years of age, lived several days after the rupture took place, suggests this where the diagnosis can be established sufficiently early. It is however doubtful, granting the practicability of the procedure, whether an extensively degenerated heart muscle will allow formation of scar tissue.

The following two cases of spontaneous heart rupture without the formation of heart aneurism have come under my observation within the last two and a half years.



Case I. A. B., a stout well-built man, about fifty-five years of age, nurse by profession, was taken ill at 5 p. m. on a Sunday after having, on the morning of that day, and on the two days previously, been lifting heavy furniture about in moving. There was no past history of rheumatic joint trouble or addiction to the use of alcohol, and the patient had always enjoyed very good physical

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THE HAHNEMANN HOSPITAL COLLEGE

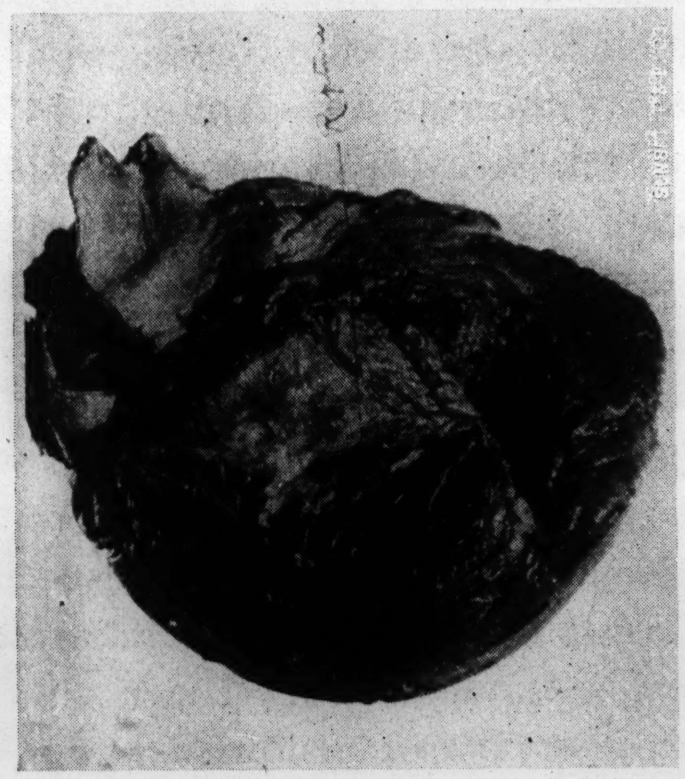
health with the exception of having been for years subject to attacks of malaria. While walking on the street he suddenly felt a sharp pain in the chest, walked home with difficulty, went to bed and had mustard plasters and fomentations applied to the chest. After awhile without having received other treatment the pain ceased and he went to sleep resting well till 5 o'clock the next morning, when the pain returned and a physician was summoned. The latter found the patient suffering with a pain extending from the sternum along the left side to the back, percussion showed a slight enlargement of the cardiac dullness, and the normal resonance over the left lung. The heart tones were clear and loud, and only at times intermittent; no murmurs were audible. The pulse was full, about 85 per minute. Over the left side of the chest, below and to the outside of the nipple, pleuritic friction tones were audible. Respiration was irregular and somewhat quickened. Considering it a case of pleuritis sicca a hypodermic injection of morphine with other appropriate treatment was prescribed. At 11 a. m., six hours afterwards, the patient felt a sudden increase of pain, and began to be cyanosed and dyspneic. When the physician was again summoned he found the patient dying. Death took place two hours after the onset of pain with cyanosis and dyspnea.

An autopsy was held twenty hours after death, examination of the chest only being permitted. On opening the left pleural cavity no extravasated fluid was found nor fresh lymph deposit, but a number of old pleuritic adhesions, fibrous bands, were found in the lower part. Lungs appeared normal. Pericardial sac was found enlarged, and upon incising it blood oozed from the opening. It was found distended with blood mostly clotted, and a blood clot was found protruding from a small opening near the right border of left ventricle, which measured on pericardial surface 2.18 cm. in length, and was 4.5 cm. distant from the apex and .625 cm. from septum. After the blood clot had been removed, the opening was found to communicate directly with the left ventricle, and was large enough to allow the passage of a goose quill, myocardial tissue of the layers nearest the endocardium being crowded into the opening, almost filling it as shown in the specimen. A superficial tear through the visceral pericardium and epicardial layer of the muscular tissue 4 cm. long was found 2.8 cm. from the right border of the left ventricle and running parallel with it. A smaller surface tear .62 cm. long was found near the apex 1.87 cm. from the center of the rupture. Around this tear there was an extravasation of the blood beneath the pericardium. At the apex the thickness of the ventricle was about .3 cm; near the rupture about .47 cm., about normal amount of fat deposit under pericardium. Coronary arteries were found thickened in places and atheromatous swellings of the walls were especially marked in the beginning of left coronary artery. Incisions of heart muscle showed streaks of yellowish butter-like color, especially close to endocardial lining and extending into the papillary muscles, taking up over one-half diameter of same. Endo- and pericardial surfaces had normal glistening appearance and former showed yellowish streaks in places underneath. Orifices and valves normal. Heart firm to touch. Weight 481 g. measured about 11.5 cm. in length, 11 cm. in thickness and 9 cm. in width, and had a circumference at the base of 25.5 cm.

Sections from this heart, shown under

microscope, have been cut from a portion of ventricular wall located between place of rupture and apex. Stained with Bismark Brown they showed longitudinally cut muscular fibers whose striation is in some parts intact, in others almost hidden by fat granules which are frequently strung about edges of fibrillæ. In some places these are separated by spaces containing muscle nuclei and structureless detritus.

Case 2. J. J., admitted March 4, 1879, to the State Insane Hospital at Stockton, a native of Ireland, was said at the time to be about 40 years of age, to have worked in the mines of Calaveras County, and to have been for years addicted to liquor to excess. When admitted he presented symptoms of an acute mania, characterized by hallucinations and delusions of a marked religious nature. In the course of years the symptoms became milder, but without at the time of his death being mixed with indications of terminal dementia. He was a large well-built man, rather fleshy, measuring about 6 feet in height and weighing upwards of 190 pounds. During his stay in the asylum he had enjoyed excellent physical health, had never been sick, and went to bed on the evening of the 29th of July of this year feeling as usual.



Early on the following morning he was found dead in bed. He occupied a dormitory with eight other patients, and neither these nor the night attendant, who looked into the room once every hour during the night had had any reason to suspect that he was ill. He was found lying on his back with his legs drawn up in a position of easy repose, with his arms folded over the abdomen, but lifted slightly from the surface by the rigor setting in after death. No froth or bloody mucus was exuded from the mouth or was found about the bed. Post-mortem findings circa 12 hours after death: Cadaver well nourished, extremely pale; no edema in face or extremities; no bruises observable; rigor mortis extreme; cadaveric spots slightly present.

On removal of scalp no hemorrhage is found under same. Calvarium slightly below average in thickness; skull cap adherent to dura over its entire surface so that the brain is only removable with skull cap. About occiput a layer of reddish fibrous tissue separates skull from dura, which is quite adherent to pia along longitudinal fissure. Pia is thickened milky, and rich in blood vessels. Vessels at base of brain healthy, but middle cerebral arteries in Sylvian fissures show atheromatous deposits. Cerebral convolutions almost white in color numerous, of average depth; cortex thin; medullary substance normal in appearance. Cerebral gray centers, ventricles, pons, crura, cerebellum and medulla show no marked pathological changes.

Lungs normal, very pale, extensive old adhesions in right pleural cavity; no exudation.

On opening pericardium a bloody fluid oozed out, which with immense blood clots adhered to surface of heart is found to measure 736 g. or about a pint and a half.

The heart enlarged, flabby, shows a tear about 1.15 cm. in length, located about 3.75 cm. from right border of left ventricle and about same distance from apex, which is semicircular in shape with its concavity directed toward right border of ventricle. In center of tear a small opening admitting an average size probe is found to connect with a tortuous canal, the under end of which is lost among columnæ carneæ. Above tear in direction of base are two longitudinal streaks of extravasated blood, and at lower end of one of these streaks is a small superficial tear; epicardial fat tissue is thick around bases of ventricles especially over right ventricle, where it measures .5 cm. in thickness; mitral valves show fatty deposits; auriculo-ventricular orifices of average size. Circumference of ventricles measured 29.0 cm. apex formed by left ventricle; length of heart, 14 cm.; thickness, 12 cm.; width, 9.9 cm.; weight, 640.5 g.

Peritoneum and intestines show nothing pathological. Liver somewhat enlarged, fatty, gall bladder distended with stones varying in size from a hazel nut to a hemp seed, and numbering in all 244, not counting fragments. Spleen enlarged; weight 322 g.

Kidneys show numerous cysts on surface opened on removal of capsules which are not adherent; cortex somewhat thicker than normal, congested, not granular; conjoint weight 323 g.

The heart muscle is of a homogeneous, pale yellowish brown color, friable especially in the wall of left ventricle, thickness of which near the rupture is about 0.6 cm. at the apex about 1 cm. It is only in very few places that the streaks in the muscle tissue may be seen. Descending branch of the left coronary artery is unusually wavy and its walls are thickened, especially in its distant portion. No occlusion of lumen found. Microscopical sections have been prepared also from this heart and from a corresponding part of walls of left ventricle, situated between point of rupture and apex. One section showing transversely cut fibers, which in places are separated by spaces varying in size, containing a structureless mass adjoining transverse sections appearing to be smaller than where spaces are not found. Muscle nuclei are evenly distributed through section, except where these spaces are found. Longitudinal section shows transverse striæ only here and there, and then just barely perceptible; while many of the fibers looked like tubes filled with granules. Muscle nuclei are in places immensely swollen, frequently three or four times their normal size and quite granular in appearance.

The two spontaneous heart ruptures described above were due to the same, the most common cause, fatty degeneration of the muscular fibers connected with a more or less marked arteriosclerosis, but in many respects the one contrasts the other. In the first the fatty degeneration was localized in spots, showing yellowish-white streaks here and there, while the microscope revealed the presence of intact as well as degenerated muscle fibrillæ, while in the second cases the degeneration was diffuse affecting almost every fiber, affecting transverse striæ and producing swelling of muscle nuclei. In the first case the heart appeared to be in a state of contraction, and was comparatively a little enlarged; in the second it was flabby and greatly dilated. In the former the accompanying hemorrhage took place suddenly and through a large tear, and leading to extreme cyanosis and probably heart paralysis through interference with the return of the blood to the heart, in the latter case the hemorrhage occurred through a small fistulous opening and was consequently slow but copious, causing death probably by celebral anemia, judging from the exsanguinated appearance of the corpse and internal organs. In the first cases the rupture was attended by premonitory symptoms and much suffering; in the second it was seemingly not accompanied by sufficient pain to wake the patient; and while in the first the rupture could be connected with the heavy lifting done some hours previously, the rupture in the second case took place while the patient was perfectly quiet and asleep. In the first case there was a history of malaria, in the second of alcoholism. The location in the two cases was almost in the same spot of the wall of the left ventricle near the apex which is the part most frequently affected. That this is the case is probably because the descending branch of the coronary is oftener than any other branch the seat of sclerosis or atheromatous changes, the obstructed circulation leading to disturbances in the tissue respiration, a diminished number of red blood corpuscles giving off an insufficient quantity of oxygen to the muscular fibers, which in turn results in a decomposition of the latter into nitrogenous and nonnitrogenous substances, the latter forming fat granules.

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RACHITIS.

BY DR. GEORGE L. EATON, OAKLAND, CAL.

Read before the Alameda County Medical Society.

Mr. President and Members of the Alameda Medical Society: I desire to present for your consideration this evening, the subject of rachitis, by citing a few cases, that have come under my professional care. One especially, the history of which is as follows: Female child, born of parents whose history seems perfect, with the exception of the mother whose teeth are those described by Hutchinson as due to inherited syphylis. The child only weighed four pounds at birth, but was very healthy and strong. Flourished for about a month upon mother's milk, when at that time it was placed upon artificial preparations, oatmeal water, etc. At three months, it was emaciated and very cyanotic. She was then placed upon cow's milk and lime water, and from that time she grew fat and healthy, until she reached the age of eleven or twelve months, when she contracted la grippe, and from that time never gained; notwithstanding the fact that her diet was carefully watched. At the age of thirteen months the chest and legs developed rachitic symptoms, and from that time up to the present date she has gone through all the deformities as represented in the accompanying photographs. Her teeth were very late in making their appearance, and soon decayed from lack of cement. Her second set are very irregular, and of the Hutchison type. Her two brothers, the oldest 16 and the second 12, are perfectly healthy, with the exception of the peculiar teeth described above. I may say that the above case is from parents, who have always been in good circumstances.

My second case is that of a negro boy, who came under my care while I was in the outdoor department of the University of Nashville, Tenn, whose history is as follows: Henry W., age five years, weight not secured; mother had had syphilis and father apparently free from any constitutional disease, except a slight trace of tubercular adenitis. Patient seemed to be well nourished; as yet no teeth have made their appearance. There is a marked tendency toward lateral curvature to the right. Forehead square and with several nodules under the scalp. Both tibiæ bowed similar to case No. 1. Left shoulder much higher than the other, and marked deformity in chest. At birth he weighed ten pounds, and was a good "feeder." When about three months old his mother noticed that he was loosing flesh, at the same time eating very freely of most every thing she gave in the way of liquid food. The child did not improve until she gave him "hog fat," and from that time up to my examination, he had grown with no diminution of the deformities, which were principally the chest, spine and legs, and a complete failure of teeth.

I attribute the sole cause of rachitis in the above cases to congenital syphilis, and I now realize that this child had craniotabes of a very marked type. The above cases are examples of many that I saw while in the South, and the only reasonable explanation I can give is that formerly, the slave had been well fed and clad, had lived in wholesome houses, and had been well cared for when sick. Now they have to work and shift for themselves, and being often intemperate and lazy, they totally disregard all sanitary rules. This has exerted a very deleterious effect upon the offspring, and as a result the race is undergoing a serious and rapid decay. A predisposition to rickets, in the colored race, would seem to be an acquired one, for the native African seldom shows any evidence of this disease. Another peculiar condition in the cases that I have seen among the negro is that the bone lesions are often late in appearing. Their heredity seems to be a most important etiological factor, for their parents are as a general rule tubercular and syphilitic.

The etiology of this disease is as obscure to the practitioner of to-day as it was to our brother physicians a hundred years, aye, three hundred years ago; for in an article by William Nesbet, M. D. of Edinburgh, published 1796, he describes the disease as accurately as do our shining lights of to-day, and in his article he has the following to say: "This disease was first accurately described in 1650, which has rendered its appearance, since that time, a great object of attention, and though it may have been known to the ancients, no full or complete description of it is to be found in their work." Looking carefully over his article I find the only progress we have made in the last one hundred years is in the treatment. After searching literature very carefully, I find many theories as to the etiology, some of which are as follows: Parrot and Boerhaave claim that rachitis is only a manifestation of congenital syphilis, but this is certainly a mistake. Still, syphilis is a strong predisposing factor, and probably it produces this disease by undermining the child's constitution, and robbing the nervous system of its required force, at the same time crippling the digestive organs. The other theories of bacterial infection, and gastro-intestinal disorders, are the principle etiological factors adhered to, there being no doubt but that gastro-intestinal irritation plays quite a role in the production of rickets. Other theories that have been put forth are those of Oppenheimer, who contends that malaria is an important etiological factor, while Volland believes in specific virus, Chamner in contagion.

A hundred others have offered theories, some good and others without a foundation, especially Oppenheimer in regard to malaria, and if his idea be right then we must necessarily have an over abundance of rachitic children in the Sacramento and San Joaquin valleys of which on the contrary we have but very few. I most conscientiously believe that in digestive disturbances, whether due primarily to some congenital disease or infirmity that has deranged the cerebro-spinal nerve centers, thereby impeding the proper distribution and absorption of earthy salts, lies the secret on which rest the main facts; because the child is generally born in apparent good health and of the average weight and not until after the first 6 or 8 months do we notice any trouble, when the bones begin to call for a large amount of mineral matter and the alarm is sounded, and that alarm generally comes from the gastro-intestinal route. I will state here that up to October, 1895, according to Dr. Fruitnight's report there had only been four cases of congenital rickets reported. The histological examination of the bones, in the cases of congenital rickets, is so different from true rachitis that it is deemed advisable to separate the two affections entirely, although the microscopical appearances are exactly the same. The zone of ossification of the cartilage, instead of being high up, is very narrow, and slightly vascular, an important point in true rachitis.

Although the geographical distribution of rachitis is preëminently a disease of the zone of central Europe and also at present of the United States and Canada, in Europe, Holland, Germany, Hungaria, Russia and Northern Italy it is very common. In Switzerland it is found everywhere, more in the industrial than in the rural districts, but the highest Alps have no immunity. In the far North, in Norway, Iceland and Finland it is said to be scarce, owing to the cold climate more oxygen is used, more carbonic acid exaled, the blood contains more cells and more hemoglobin. Tropical climates have no rachitis. It is unknown in Africa, Central America, Central Asia, China, Japan and Islands of the South Seas.

Albert S. Ashmead, in the *Medical Record,* October 11, 1891, says that rachitis does not exist in Japan, he has never seen a case, and has never met a Japanese physician who has ever heard of one, neither is it mentioned in their books. He believes it is due to the universal fact that the children are all breast fed for a very long period of time. At the same time the mothers are very large consumers of fish and other products of the sea, all of which have a maximum part of phosphorus. As a rule rachitic infants are presented for observation when one or more symptoms are quite prominent, such as rosary swellings of the costo-cartilaginous junction, and a marked tendency toward gastro-intestinal disturbances. In the next few months these anomalies are said to develop more and more. On the other hand V. A. Hoffman declares rachitis to be rare in the first half year of life. In the majority of cases we find the disease making its apearance about the period of dentition, this is the time we notice the digestive disturbances more pronounced, with the loss of weight. In this disease, a child will lose in two days, what it would take two weeks to replace. With this diminution there may be a slight fever with a tendency to profuse sweating, particularly about the head and neck. The tissues become soft and flabby, the skin is pale, and sometimes of a bluish color. If there be much emaciation, from the plump condition of a few weeks ago we now have a puny and feeble child. Such cases are by no means uncommon, for in our daily work we are constantly coming in contact with such cases, and by judicious feeding we find immediate improvement. Coincidently with, and following closely upon the above symptoms, the bony lesions appear. The changes, first noticed in the chest, form what is known as the rachitic rosary, which may be distinctly noticed if the child be in an emaciated condition. They make their appearance about the third month, and are rarely seen after the fifth year. From the first appearance of these nodules, we may expect to find some characteristic irregularity in the bony structure, as the protusion of the sternum principally in its lower half, forming the so-called chicken or pigeon breast. Posteriorly the processes are prominent, and lateral curvature may be produced by allowing the child to get into the habit of sleeping on one side, as as in case No. 1, who has a lateral curvature to the right. The bones or sets of bones to be effected next in order, are the long bones, principally the tibiæ, radius and ulna. The periosteum of these bones being soft, acts as a protection to the inflamed bone, in which there is a certain amount of curvature particularly in the lower extremities. The direction of the curvature depends principally upon two factors, muscular action and the weight of the body.

We must treat as the case requires. If the mother is unhealthy or cannot from any cause nurse the child, a suitable wet-nurse should be provided, free from any constitutional disease. Or the child must be artificially fed, cow's milk, diluted according to the age of the child, should constitute the chief food. Care should be taken to examine the condition of the stools, and if curds are present the child is taking too much, or, it is improperly prepared. The child should be warmly clad, and should be in the fresh air and sunshine the greatest part of the day, with an occasional electric light bath introduced by Dr. J. H. Kellogg in a paper before the American Electro-Therapeutic Association, page 153, 1894. After the bath careful friction with almond or olive oil is very advantageous, and if properly performed, allays irritation. Special care should be taken to prevent deformity. The child should not be allowed to walk, and for this purpose splints applied so as to extend beyond the feet are very effective. The giving of medicine depends upon the constitutional condition of the child. Anemia based upon parental syphilis, like unto the cases just described, requires mercury, not iron, and it is best prescribed in the food in the form of a solution. After the child has attained the age of self feeding, I like some form of oil, principally petroleum emulsion, containing phosphorus. For the correction of the deformities, as in case one, I look upon osteotomy as the operation par excellence for the correction of the deformities in the legs.

Indications for Operations upon the Gall Bladder.

(1) Cases marked by repeated attacks of gall-stone colic, which resist all treatment and are exhausting the patient's strength; (2) when there is evidence of suppuration about the gall bladder, due to gall stones; (3) in empyema; (4) in dropsy of the gall bladder; and (5) in obstructive jaundice, due to gall stones in the common duct.—ROBSON.

Occidental Medical Times

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SAN FRANCISCO, OCTOBER 15, 1899.

THE COUNTY SOCIETY LIBRARY.

The years 1898 and 1899 have been marked by very great activity in the formation and building up of medical libraries in almost every large city of the Union. This is strikingly true of Boston, Denver, Chicago and towns of the middle Northwest. Some effort has been made in Seattle and Portland to infuse the profession with the great benefits to a community of a medical library. Los Angeles, through the great generosity of Dr. W. A. Hendryx, is far in advance of any Pacific Coast city in this most laudable work, and has already established a worthy nucleus. The subject has occasioned some discussion in our midst, but comparatively no action. Cooper Medical College has been endeavoring for years to increase its library, and, to a considerable extent, has succeeded. An effort is now being made to build up the library of the Medical Department of the University of California, and if successful a most excellent home will be made for its books in their new and handsome building.

These libraries, while most worthy the spirit that urges their formation, will be limited in the good they can do for the profession at large. For the student body of these schools they are more than a necessity, since in these days of the extreme prominence of clinical teaching over didactic courses the student is fast becoming a self reliant and compend product rather than the broad and well read practitioner of former days. Great indeed is the knowledge to be gained by a careful study of the old masters, many of whose conclusions have been merely verified by the discoveries of our day. Our greatest and best of living teachers are not the product of the clinic, but of the didactic course, followed by ocular demonstration of the insight, gained from these veritable store houses of erudition. It is plainly evident that the student of to-day, the product of the clinic will find, when in practice, that the human machine cannot be understood by the eye and ear alone, but that beyond is a depth, only penetrated by the aid of thought and deep study of the harmonious working of this wonderful composite.

Under such conditions we believe that a library to bring the greatest good, cannot be found within the halls of any of the schools, but must be either public or belong to a body like either the state or county society. To the latter we seemingly must turn for aid, but there must be mighty changes. As it exists to-day it is by no means as large or as comprehensive as the needs of the profession or our geopraphical position demands. It subscribes to a class of journals of the very first quality, but unfortunately unintelligible to the great majority of its members. It is remarkable indeed to note the abscence from its shelves of so many of the leading English and American journals. Why this is, we cannot say, but it is at least astonishing in the face of the part played by the American and English speaking people in the great advance of medical knowledge.

Many complaints are made of the poor use of the library, and we believe that herein lies the true and only reason. The library is entirely inadequate to meet the demands of the profession. This condition of its shelves is certainly not due to its finances, as the society is amply able to be more liberal in its subscriptions to both books and periodicals, and if more attention were given to the building up of its library, instead of the perennial harangue about such a costly experiment as owning a building of its own, undoubtedly the meetings would become more popular, and the library meet with the patronage it would deserve.

A library is not only a necessity, but it is a most excellent index to the knowledge and culture of a community; but we refrain from drawing any comparison between the literary standing of our physicians and the frequency of their visits to the County Society's library.

There are many ways in which our library can be made larger and more useful, and while the profession should be urged to donate books, periodicals and their libraries, following the splendid example of the widow of the late Dr. Hall, instead of having them sold for a disgraceful pitance, the subscription department should be increased and the desire of the many should be encouraged to see the County Society's library the largest on the Coast and second to none in the country.

REAL LITERATURE VS. PREVENTION OF CONCEPTION.

In the July issue of the *Southern California Practitioner* there appeared an article by Dr. J. C. King entitled, "Ethics of Preventing Conception," which was considered of such suspicious value under any interpretation, that it was hoped that it would be passed without serious comment.

An editorial in the same journal for August however puts it forward in such a bold and unsuspected light that we deem the latter worthy of notice and denial.

The subject of prevention of conception comes up so very frequently in the daily life of the physician that we are not surprised at the tenor of the article. The physician alone realizes its frequency, and unless he is ever on the alert to uphold higher aims than the materialistic dogmas of the day, he is easily led to believe that the practice may become universally justifiable. That it seems as much a crime for some parents to bear children, as it is in exceptional cases to prevent conception, cannot rationally be denied from a purely medical standpoint, but we do not care to open up the moral aspect of the question, rather to earnestly protest against the idea expressed in this editorial that such topics are a possible field for forming a medical literature that is "really literature." We regret that any such expression ever found its way into the sanctum of our esteemed contemporary, as it is so evident a fact that such a subject would lead, even if it were possible to devise a literary standard thereby, to no higher grade of merit than the Besant, the French novel or the yellow back, green-eyed efforts that fill our book stalls, degrading men and women and filling the youthful mind with just just rot and wickedness as is calculated to arise from a public discussion of the efforts and means to be used in preventing conception. Such abominations need no literature to advance their popularity, and we urge more laudable subjects for the thoughts of our physicians, who are aiming to set up a medical literary standard. We were painfully shocked to read that by this means so able and distinguished an editor, Frank Foster, was thus debasing his talents.

When it is asserted that we have no medical literature is it possible that the *Practitioner* was unmindful of the works of Watson, Fothergill, Osler, Parvin, Godding, Gowers, Sir Andrew Clarke, Allbutt and a host of others, whose elegant and classical diction would make a proud literature for any profession, and whose works and thoughts aspire higher than educating people to eradicate themselves and their offspring by willful and wanton prevention of conception. For such knowledge, spread by such means, can never reach the class where prevention, if it were worthy of use, could alone be considered justifiable, but it adds to a class already too great and well versed, who, though amply able to bear children both from a financial and a physical, but alas not a moral point of view, will continue to fill our cities with monster caranvansaries for barren women and faithless men. This is surely a sad commentary on our boasted civilization, and it is sadder to reflect on the position of the child of to-day, who, escaping the sinful vigilance of both parents, comes unbidden into the world, to be despised by landlords, hated by servants and nurses, a refugee from strenuous efforts to prevent his being born, and lastly the target of certain doctors, endeavoring to build up a literature on the knowledge of how best to prevent these little innocent souls from occupying for a short period of time the womb of the mother. Is this not a shame, a crime that should have been visited on thousands to-day now boldly and blatantly defying God and Nature to the base destruction of the race? It is with pleasure we realize that the law of survival of the fittest is inevitable and just.

OUR ANNUAL COLLEGE ANNOUNCEMENTS.

Some time ago we made mention of the recent changes in the faculty of the Medical Department of the University of California. Since that time other changes have been made, which will very greatly add to the high standing of this school. With the advent of the new president, Benjamin Ide Wheeler, Dr. A. E. Taylor of Philadelphia, formerly pathologist to the Pepper Laboratory has been made Professor of Pathology; Dr. J. M. Williamson, Clinical Professor of Genito-Urinary Surgery; H. M. Sherman, Professor of Principles and Practice of Surgery; T. W. Huntington, Associate Professor of Clinical Surgery and A. A. D.'Ancona, Dean.

In the announcement of Cooper Medical College no important changes have been made in their excellent faculty.

The announcement of the College of Physicians and Surgeons comes in a new and attractive form, and is full of spirit and energy. We think, however, that this energy has overleaped itself and violates the rules of the Association of American Medical Colleges, of which it is a member, when it proposes to graduate men and women as physicians, dentists or pharmacists, while pursuing one course of studies. It proposes to do this by a special arrangement, which if the requirements for each course are adhered to, is impossible of attainment and contradicts the very wording of the announcement. Such an arrangement is unjust, an infringment and works a hardship on the graduate that will certainly force him or her to seriously neglect some of the numerous duties, proposed by the rules and regulations of the school. This feature of their programme is not advancing medical education as the faculty announce, but ungenerously lowers the standard of medical education and sets a very bad example.

The announcements of two new schools are also upon our table. One, the California College of Dentistry, under the guidance of Dr. S. W. Dennis; the other the San Francisco College of Medicine and Surgery, announcing at present only its dental department, both of which are aspirants for the favor of the profession and public.

SOCIETY PROCEEDINGS.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

September 12, 1899.

President Dr. George W. Davis in the Chair.

QUARTAN MALARIAL FEVER.

Dr. Philip King Brown exhibited a patient and spoke as follows:

" This is the second case of quartan malaria that I have seen in California; two out of about two hundred cases. Quartan fever is very much less common than either of the other forms. This man had his first chills in November last. He was treated and got better. In March he had chills again and has been ill since then. He came from Stanislaus County. It is a strange thing that people leaving malarial districts, where they have lived for a long time, have manifestations of the fever upon moving into other districts. This patient appeared at the clinic this morning with a temperature of 101°. At half past three this afternoon it was 102.5°. Just now it is 100°. It is characteristic of malaria, especially the tertian in California, that the plasmodia do not segment in groups and we have irregular manifestations of fever. The extra-corpuscular forms outnumbered the intra-corpuscular forms.

" I will show the size of the spleen in this patient, which I have marked out. You will see that it is not at all large for a man who has chronic malaria. Never in any place have I seen as many parasites in quartan fever as I have in this case."

HOME TREATMENT OF CONSUMPTION.

Dr. Albert Abrams read a paper on, " THE HOME TREATMENT OF CONSUMPTION."

Dr. John C. Spencer:—" I can commend what Dr. Abrams has said for many reasons, but principally that the majority of the cases of tuberculosis that present themselves to us for treatment, are not able to go away and avail themselves of the benefits of climate. Since there is such a large class of individuals in the community not able to go away, a paper calling attention to the advantages and laying stress upon certain details, which we know in a general way, but do not pay much attention to, is certainly very timely. The advantages of tent life which Dr. Abrams has referred to, are appreciated by those of us who have slept in a tent."

Dr. Leo Newmark:—" In an age where there is such an ardent search for specifics for tuberculosis, I would like to ask Dr. Abrams if he looks upon them as being adjuvants to the home treatment of consumption or would he discard them altogether?"

Dr. Brown:—" Work of this kind offers a standard of comparison by which we may judge of the efficacy of the various cures for tuberculosis. It was brought very forcibly to my mind some years ago when Bonney of Denver wrote an article, tabulating 200 cases where he had given out of door treatment. His cases were so very much better than those published by men who had used the so-called specifics for tuberculosis."

Dr. Albert Abrams:—" Referring to the citation of Dr. Newmark regarding my ignoring the specific medication of phthisis, I did so purposely because my paper would be too drawn out. I have entirely given up specific medication as superfluous, and, furthermore, when the patient submits himself to specific medication, he ignores hygienic treatment which is so essential.

" With reference to the maintenance of the circulation as a means of regulating the temperature of the body, that one would suppose that increased muscular exercise would cause a rise of temperature. I experimented and found that instead of having a rise of temperature after bicycling, the temperature was really lowered. A cold is not a cold itself, but is an infection. We prevent catching cold by hardening the person. As far as the patient's being exposed in the hammock is concerned, it is the easiest thing imaginable to wrap the patient up well in a blanket.

" With reference to the perspiration. The inhibition of perspiration has been heretofore recognized as a detrimental measure, just as it was thought that the application of medication to drive rheumatism away, would drive it to the heart. That is abandoned. We have many noticeable remedies recommended for that purpose. I can see no unfavorable sign in the checking of perspiration. The open air treatment has demonstrated this fact unequivocally; that the perspiration is the manifestation of septic poisoning and when the patient is exposed to the open air, this sweating will cease of its own accord."

LIGATURES AND SUTURES.

Dr. Z. Taylor Malaby read a paper on, " LIGATURES AND SUTURES," and showed some specimens of catgut which he had prepared by the cumol method.

Dr. J. Henry Barbat:—"Different operators naturally use the ligatures, which they find the most successful, and there is no doubt that any man, who has done any abdominal work, will finally come to the conclusion that absorbable sutures are the only ones which we are justified in placing in the abdominal cavity. As Dr. Malaby has stated, we have seen many patients, in which work has been invalidated by leaving a fistulous track from using non-absorbable sutures. The catgut, which I found most successful for rapidly absorbable work, is the cumol gut. In the fascias or where we expect the ligatures to last a great length of time we use either the formalin or the chromicized gut. I have no objection to the formalin nor the chromicized gut when properly prepared. Eight to ten minutes boiling in the carbolic acid solution of the formalin gut will sterilize it sufficiently. Chromicized gut soaked in alcohol can be sterilized sufficiently. As for the kangaroo tendon used in a few cases of hernia, I saw no advantage over the properly prepared formalin or chromicized gut. I have seen one case in which a knot slipped in a ventral fixation. One feature that we have to recognize in using the catguts is the tendency of the knot to slip after the catgut has been in the tissue for a few hours. It is our invariable practice to make a third knot in tying catgut ligatures. The chromicized catgut does not necessitate this on account of its dry condition and the extreme slowness with which it absorbs the fluids of the body. It does not swell as do the other ligatures.

"For skin suture I think that there is nothing that will equal the silkworm gut. The intracutaneous stitch is the one that should be used under ordinary circumstances. Except in special cases I do not think we are justified in using a number of sutures, which will leave an ugly scar in the individual. We can take a large incision on the face or on an exposed part, and place a subcutaneous stitch that leaves a fine mark instead of a scar that looks like a centipede."

Dr. F. B. Carpenter:—"In reference to ligatures slipping, as unquestionably they do, I have adopted in some instances a scheme advised by Dr. Cushing of this city. It consists simply in dipping the ligature a few minutes before using, into a sterilized alcoholic solution of resin (two or three grains to the ounce). If it is in the right proportions, it gives your hand security on the ligature and the knot once tied will not slip. There is another feature about the chromicized and the ordinarily prepared ligature and that is this: In using a formalin or cumol ligature the absorption of water from the tissues causes the ligature to swell which causes it to shorten and strangulate the tissue. The chromicized ligature will not do this.

"The other feature of using ligatures, which I have learned from my own experience is, not to use a large ligature. Always use as small and as fine a ligature as possible. In sewing fascia I never use a larger suture than number one. It is strong enough and the larger ligature with more strength will probably cut through the fascia as it swells and shortens. Furthermore I have learned from experience that the knot, particularly from the chromicized ligature, if it be near the skin, will in time cause an ulceration through the skin, the knot acting as a foreign body. This is entirely remedied by using a fine ligature. The author of the paper I believe refers to the tendency of all permanent sutures to sooner or later come to the surface. That recalls to my mind a case where I used silkworm gut. Two years afterwards I removed the ligature through an incision made over the scar tissue. The knot which was close under the skin annoyed the patient and was gradually coming nearer the surface and was causing irritation. I simply removed the thing, and there was no further trouble. I am not radically opposed to the use of silk. It is more easily sterilized. I have sometimes used on large pedicles and large masses in which blood vessels were present, silk; but I never use it if I can feel perfectly secure with catgut. I would never use it where there is a slight possibility of infection. Sooner or later, catgut disintegrates and comes away.

"In using catgut I have been rather discouraged with that prepared with glycerine for the reason that it is difficult to handle without resin or some substance put upon it. It slips through the fingers too easily."

Dr. Malaby:—"I have adopted a plan of tying knots. In the square knot, in the second portion, make the second turn on the last half.

"It is striking to note that Senn never uses anything but catgut. Robertson never uses catgut. That shows the difference of opinion.

"I think that with silver solution catgut can be rendered aseptic."

Dr. John C. Spencer exhibited a BOTTINI PROSTATIC INCISOR and a VALENTINE'S URETHROSCOPE demonstrating the use of the instruments.

Dr. J. Henry Barbat:—"Not knowing the style of Dr. Spencer's Bottini instrument, I brought the one that we have at the Waldeck to-night simply for comparison. This is the same instrument with a modification, it is an easier instrument to manipulate. This is probably the best device that we have in cases of true hyperplasia of tissue, but in cases where we have continued congestion causing vascular enlargement, it is of no use whatever, and in these cases we get the benefit from vasectomy or castration. In the cases in which we find a true hyperplasia of tissue we get no benefit from vasectomy, but we do get benefit from cauterization. The best method to follow in using the Bottini instrument is to fill the bladder with air instead of water. As soon as you fill the bladder with water and use the cautery, you generate steam in the bladder and cook the tissues."

Dr. F. B. Carpenter:—"With reference to this urethral illuminator, the point that Dr. Spencer lays much stress upon, is the absence of heat at the point of the instrument. It is very difficult to see through the ordinary urethroscope with a head mirror or an ordinary reflector. This second instrument which the Doctor has shown certainly gives a very good picture at the inner opening of the tube.

"I have an instrument that is not as convenient as this is in the way of portability, although it can be used with a storage battery. It is made to throw the light by means of a right angle prism. Over the top of the holder you have a full view of the whole interior and it does not cause the confusion, which the head mirror causes by crossing rays. The rays are all parallel and there is no heat whatever. One further advantage is that the light is contained in a single tube for examining any dark cavity. I do not believe that it could be applied well to the male cystoscope. The instrument which the Doctor has shown is a very neat and practical arrangement."

Dr. Spencer:—"In regard to creating steam; that might occur through awkward manipulation of this instrument. If properly applied, the beak of the instrument cannot come in contact with the fluid. The instrument should be kept hooked tightly against the mucous membrane of the prostate gland."

Dr. Leo Newmark exhibited a spinal cord taken from a case of syringo-myelia. A cavity extending from the dorsal region of the cord up into the cervical region was demonstrated.

CALIFORNIA ACADEMY OF MEDICINE.

September, 1899.

CARCINOMA OF THE KIDNEY.

Drs. Tait and Caglieri presented some specimens removed from a patient at post-mortem. Dr. Tait made the following statement in regard to the case:

"The specimens, which I have the pleasure of presenting to you and which may be of some interest, is one of intravesical tumor causing unilateral hydronephrosis. The patient's history is briefly as follows: Woman, aged 74, presenting very marked diffuse atheroma. No history of either renal or vesical lithiasis, nephroptosis, or traumatism. In November, 1898, she first noticed what she called a painful lump in the right hypogastric region, immediately below the anterior border of the liver. This mass increased in size very rapidly, but the pain did not increase in proportion with the size of the mass, nor did it become constant. Hematuria was first noticed shortly afterwards and occurred several times during the next five months. I examined the patient for the first time in May, 1899, and detected a tumor manifestly of renal origin, irregular in outline, movable, and slightly painful upon palpation. Its dimensions were approximately 20 by 25 cms. She stated that she had never failed to find the mass since the day she first noticed it. The urine averaged 1,200 to 1,500 grams daily, and contained albumen and a few blood corpuscles. No further examination was deemed necessary and the diagnosis of carcinoma of the right kidney was made. On account of her advanced age and the marked atheromatous condition no operative measure was considered warrantable. She died three and one-half months later of pulmonary congestion. The necropsy showed an enormous hydronephrosis on the right side, not a trace of the kidney parenchyma being detected. The corresponding ureter was dilated in its upper two-thirds to four times its natural size, and the lower one-third contained blood clots. There was no stone, stricture, torsion or adhesion in the course of this ureter. Upon opening the bladder the cause of the hydronephrosis became immediately evident; a soft papillomatous tumor had developed at the site of and surrounding the right ureteral orifice. Dr. Caglieri has kindly made slides from this tumor, a specimen of which can be examined with the microscope. It does not seem to be a malignant growth. Hydronephrosis from intra vesical tumors is well known, and in fact is described in many elementary text-books. This, however, is the first case I have seen in which the vesical tumor was not malignant. The case illustrates the possibilities of error in the differential diagnosis of renal tumors, and also the absolute necessity of instruments of precision and of careful chemic and histologic examinations in the study of such cases. I wish to emphasize this latter fact, in as much as, at a recent meeting of the San Francisco County Medical Society, a distinguished surgeon of this city, and a gentleman, who, I believe, is now present, saw fit to deprecate such diagnostic methods and to disparage such work which, in his opinion, was superfluous and misleading. Had the cystoscope been resorted to in the case here reported, the diagnosis would have been cleared up instantly. Dr. Caglieri will relate the interesting condition noted in the patient's heart."

Dr. Guido Caglieri said: "The question of the occurrence of concentric hypertrophy of the hollow organs has been disputed for some time, and I believe is now granted to be a fallacy, with the possibility of the single exception in the case of the heart. In the London University Museum, with which I am pretty well acquainted, there is a specimen labeled 'concentric hypertrophy of the heart.' Whether or not that is really a specimen of concentric hypertrophy of the heart, I do not know, but if so it is the only specimen with which I am acquainted. When the heart of the patient under discussion this evening came into view at the autopsy, I was surprised at its weight and its small size. It is very heavy, but as you see not at all large. Upon opening the heart the explanation of the weight is evident. The left ventricle, while about normal in size, possesses an extremely thickened wall, a small cavity, and at the basal orifice a ring of calcareous deposit. I must share with Dr. Tait the responsibility for the diagnosis of malignant growth of the kidney. After the autopsy we were rather surprised to know why we had come to such a conclusion, for the real cause was then most evident. As a matter of fact, there was nothing to really make one suspect a malignant growth of the kidney except the age of the patient, taken in connection with the tumor and the pain. Had the cystoscope been used the correct diagnosis would undoubtedly have been made. A correct diagnosis would not, however, have altered the status of the case in the least, for the age and condition of the woman rendered any operative interference out of the question. There is some doubt in my mind as to whether the tumor is really a malignant or a benign growth."

Dr. D. W. Montgomery said:—"It is not at all easy to make a differential diagnosis between malignant and benign growths of the bladder, even with the cystoscope. So many of the vesical growths start as simple benignant tumors, and eventually become malignant that simple inspection with cystoscopic aid is hardly enough on which to make a diagnosis. I recall a suggestion of Albert of Vienna. He called attention to the fact that these malignant tumors of the bladder usually occur at the base of the viscus, and that they, to a certain extent, bore down into the subjacent tissue and implicate the mucous membrane of the rectum. Normally this membrane is very freely movable, but when a malignant growth is above and making pressure upon it, it loses this free elasticity. He introduced his finger into the rectum of a patient presenting a doubtful diagnosis and at once expressed the opinion, based upon the feel of the mucous membrane, that it was a case of malignant growth of the bladder. Subsequent autopsy showed the truth of his assumption. This sign would of course not be of so much value in women, for the reason that the tissues above the vagina are normally less freely movable than are those above the rectum. Dr. Chismore has a very ingenious way of treating these cases of neoplasm of the bladder when the factor of hemorrhage is an important one. He simply grasps the shreds of the tumor in the eye of his lithotrite and twists them off. The torsion of course prevents free hemorrhage and it is surprising how much relief he secures by this simple procedure. Many of his cases so treated go for a very long time with no hemorrhage. When it recurs he repeats the process."

Dr. Thos. W. Huntington said that he merely wished to deny holding to the opinion in regard to mechanical diagnostic aids which had been attributed to him. He had been very much misunderstood. In the case reported he was of the opinion that the proper diagnosis could have been made correctly by the use of simply the old and well recognized methods of examination. When mechanical devises are obtainable and are capable of assistance, they should be used; one should not, however, employ them to the detriment of his sense of touch.

Dr. A. E. Taylor said:—"I should not attempt a diagnosis on one such slide; a section at the base would add more light to the somewhat obscure question of the true pathology. I think, however, that the tumor is a carcinoma. There are polymorphic cells visible, which are known to be characteristic of these growths; there is penetration of the basic membrane, and also interstitial infilltative with polynuclear leucocytes. All these factors lead me to believe the specimen to be one of carcinoma."

Dr. J. Henry Barbat said:—"I opened the bladder of a patient on Saturday evening last, and in that case the value, or rather the lack of value of the cystoscope was pretty well demonstrated to me. There was considerable hematuria and the diagnosis was rather difficult. With the cystoscope what appeared to be a papilloma at the base of the bladder was seen; when touched it bled. Upon operating we found the lateral lobes of the prostate greatly enlarged and the central lobe normal. There were a few very small excrescences on the mucous membrane which might have been commencing papillomata. I am more and more impressed with the folly of thinking that we can look through the cystoscope and make anything like an accurate diagnosis of the conditions within the bladder. I am rather amused at the reports of catheterization of the ureters by means of the cystoscope, and think a goodly portion of the success of such reported procedures is in the imagination of the reporter."

Some discussion arose as to the value to be placed upon measures which purported to obtain the urine from the two kidneys or from the two ureters, unmixed. Dr. Philip King Brown mentioned a case in which Dr. Chismore, with the Harris instrument, obtained the supposedly unmixed urine of a man upon two different occasions. Analysis showed the samples of the two urines taken at the different seances, to be practically a safe guide, as, the results did not materially differ. The urine from one kidney was exceedingly scanty, while that from the other was plentiful. The diagnosis based upon these examinations was later confirmed. He had also made use of the method personally upon several occasions and thought it was quite reliable.

Dr. Dudley Tait, in closing the discussion, said:—"Dr. Huntington has given us a very good demonstration of his ideas, but I think his closing statement rather in conflict with what he said at first. I admitted at the commencement of the discussion, that our case was poorly handled and that the diagnosis should have been made. Had it been made, however, it would not have altered the result. But Dr. Huntington said that purely rational means would have disclosed the hydronephrosis, and that then the ureter could have been explored. Now certainly he could not explore the whole course of the ureter without making use of the cystoscope and the ureteral sound or catheter unless he resorts to a formidable operation. In regard to x-ray examinations as an aid in the diagnosis of renal calculi, Dr. Philip M. Jones has examined some patients for me in whom the clinical picture of stone was clear. In two cases the results were purely negative, and in these I believe the calculi are uric acid accretions. obviously they would not be detected by the x-rays."

Dr. Huntington said:—" I wish to rise once more with the object of correcting a wrong impression. I did not mean to advocate the exploration of the ureter by means of the cystoscope, nor yet by laying open the abdomen over its whole course. It is perfectly possible to exclude ureteral obstructions, etc., by purely rational methods and without operation or catheterization."

On being asked what means he would employ in the exclusion of the ureter, without making use of the cystoscope or operating, Dr. Huntington said that absence of pain, absence of the pain and painful sensations upon pressure, and absence of all subjective signs implicating the ureter, would be sufficient.

Dr. S. J. Hunkin mentioned the case of a man whom he had recently in his care. There was pain in the right side, hemorrhage, etc., and pus could be found coming from the right ureter. The case was referred to Dr. Chismore who advised operation. The man refused. Later he came again and requested operation and it was then refused. He died shortly after and it was discovered upon autopsy that he had but one kidney, in the medium line, the ureter from which branched at about its middle point. Dr. Hunkin asked what would have been the course pursued in such a case. The kidney, he stated, was one mass of small stones and no kidney tissue could be discovered.

ECTOPIC TESTIS—DISEASE AT ELBOW JOINT, ETC.

Dr. Dudley Tait exhibited a testicle which he had removed, at autopsy, from a man of 71. It was undescended and had always been in the inguinal canal. It had given him no trouble until a short time before Dr. Tait saw him. Three days after using a catheter for overcoming retention due to prostatic enlargement, he noticed pain in the right inguinal region. He was ordered ice applications and rest. The trouble was diagnosed epididymitis of the undescended testis. All trouble subsided in eight days and he went about his ordinary duties. He died from pulmonary consumption three and one-half weeks later. There was found a suppurative epididymitis of the undescended testis. On examination, spermatozoa were found in the tissue of the testis. The contained pus was sterile. Dr. Tait also referred in this connection to the method of placing the testicle, in the extraperitoneal jacket, in the modified Bassini operation for hernia, as first advocated by Dawbarn and subsequently adopted by de Garmo and Lanphear.

Dr. Tait also exhibited the forearm and elbow and lower two-thirds of the arm of a patient upon whom he had operated a few days before. The originally planned operation was a resection of the elbow joint, but the skiagraphic examination showing the whole arm to be involved, its removal was at once decided upon. The lesions of the arm extended certainly as high as the point of amputation. In Dr. Tait's opinion an inter-scapula-thoracic amputation would properly be necessary within a short time. He had so informed the patient but had not gained his consent for a more extended operation. The man gave no history of tubercular disease or traumatism, but acknowledged syphilitic infection. He had had no severe antisyphilitic treatment. He had consulted a number of physicians at various times and a number of remedial measures had been employed but without success. Recently the application of a splint to the elbow joint had been recommended. Pathological diagnosis of suppurative arthritis and diffuse osteomyelitis, probably of syphilitic origin.

Discussion was called for upon the case of undescended testicle presented by Dr. Tait.

Dr. Huntington said:—" The question of ectopic testis is of particular interest as it relates to the changes in the testis in late life. I used to extirpate these testicles, but have recently employed the method suggested by Dr. Bevan, of Chicago. The vas is loosened high up into the peritoneum and thus the extension of the cord is permitted, allowing the testicle to be replaced, or rather *placed* in the scrotum. It seems possible in this way to put the testis into the scrotum and have it remain here, which is certainly a better plan than extirpation. I should like to ask a question in this connection. Is it probable that tubercular disease of the testis could be the primary tubercular lesion, with constitutional tubercular disease following as a secondary invasion? I have now under observation a man who developed tubercular disease of the testicles some years ago, and has only within the last two years exhibited any symptoms of pulmonary tuberculosis. Certainly three or four years elapsed between the development of the tubercular disease in the lungs and larynx. I believe the present trend of authoritative opinion is to operate when the operable lesion is one of primary infection, as for instance primary joint tuberculosis, but if the local lesion is secondary to lung involvement operative measures are not advisable."

Dr. Tait:—The method of treating the ectopic testis in henia operation described by Bevan, originated with Broca several years ago.

Dr. Caglieri said:—" I remember seeing some nine years ago, a man at the clinic of the Medical Department of the University who came for hemoptysis. He had a scar upon the scrotum which he said was the remains of an operation performed some three or four years before by Dr. Morse. The sputum examination showed large numbers of bacilli and it is possible that there may have been a case of primary testicular invasion, with secondary involvement of the lungs. His previous history was not known, however, so the truth of the matter must remain unknown.

Dr. Harry M. Sherman, in discussing the matter of undescended testicle, said that it was certainly better to remove such a testicle than to allow it to remain; but better to place it in the scrotum when such a course was possible. In the abdomen the testicle is liable to give rise to many unpleasant consequences and it is therefore safer for the man to have such a testicle in a bottle than in his belly. In discussing the case of diffuse osteomeylitis, presented by Dr. Tait, Dr. Sherman said: " I saw this specimen in life a few days ago. The examination of the arm is, however, a revelation to me. My notes made at the time of the examination state that he was a man of 47 and that for ten years he had complained of trouble at this elbow joint, first appearing as pain, very much rheumatic in its nature. There were no night pains. A year later the elbow became stiff and has so remained for the past nine years. He has lost somewhat in weight and is easily tired. He sleeps well, save for the pain produced in the elbow by any movement when asleep. There is dense fibrous ankylosis, but " shake motion " is perceptible. There is thickening over the inner condyle. The left shoulder presents about the same condition, though to a less degree. There is atrophy of the scapular and humeral muscles. He could use the arm pretty well, taking off and putting on his coat without assistance. The left knee is swollen and seemed to be the seat of rheumatic disturbance. His diagnosis, rheumatism, which had been confirmed by several good men, I was inclined to accept. I did not know just what to say to him, so I asked him to return to me in a few days and said that I would then give him my opinion. I did not consider the elbow the point particularly needing my attack, for it was quite evidently gone. The shoulder I also thought to be in a hopeless condition; but the left knee seemed to demand immediate attention, for it appeared to be going in the way of the elbow and shoulder. The pain about the elbow and arm I considered due to trauma of motion, and for that reason advised rest in bed at once, with a splint upon the elbow to keep it quiet and relieve the pain. I did not think of having the arm examined by the x-ray for the reason that I thought the trouble to be rheumatism. The specimen is therefore a revelation to me. I must admit that I did not examine the arm so carefully as I should have done, for my attention was directed to the knee as being the more promising site for treatment; the elbow was beyond relief. The specimen shows clearly that rheumatism was not a factor in the case; it must therefore be either tuberculosis or syphilis. It does not look at all like tubercular invasion of bone; it is probably syphilis. I should like to compare the x-ray appearance with the shadow of the tibia of a patient now under treatment by me. She has an undoubted oeteomyelitis of the left shin, which is getting better under even small doses of the iodid of potassium. She is particularly intolerant of the iodid, but seven and one-half grains producing very unpleasant digestive disturbance. Nevertheless, she is improving. The shadow of that tibia is in every way comparable to the shadow of the humerus under discussion. I do not mean to say that any amount of iodid would have benefitted the arm here exhibited, for destruction had gone too far; but I think it is a case of syphilitic osteomyelitis."

Dr. Philip Mills Jones said that he had made the skiagraphs of the arm exhibited by Dr. Tait, and of the tibia shown by Dr. Sherman, and that the shadows were so much alike in the two cases that he thought the disease process in both much the same. It certainly did not seem at all like a tubercular bone lesion.

Dr. Dudley Tait exhibited two skiagraphs and once more called attention to the difficulty, very often, in properly interpreting the shadows found on the skiagraphic plate. The first case presented rather the appearance of tubercular lesion of the hip joint. The patient was a man about 65, ankylosis of the left hip, three inches shortening with compensatory curvature, and tuberculosis of the lungs. There is no history of syphilis or trauma. Palpation about the joint is slightly painful. Anesthetic examination does not reveal anything further. The skiagraph shows some sort of rather diffuse shadow-casting mass entirely surrounding the hip joint. The nature of the mass casting this shadow is obscure. In the opinion of Dr. Jones, who made the skiagraph, it might well be a rheumatic deposit.

A second plate was exhibited. The patient, a man about 35 years old, fell upon the left hand, sustaining a fracture of the head of the radius. The skiagraph shows what appears to be a diagonal fracture, with a fragment above the joint line and not connected with the bone below. The joint was opened but no such fragment could be found. It is true that the fragment might have been behind the joint.

Dr. Thos. W. Huntington said:—" In regard to the usefulness of x-ray examinations, I must say that I am not fully convinced that any information is to be gained that can not be obtained in other and older diagnostic methods. I believe that Roswell Park, in the closing paragraph of his last book, makes the statement that he believes no evidence is obtainable by x-rays that could not be obtained in other ways."

Dr. Sherman said:—"In connection with the case of fracture about the elbow joint mentioned by Dr. Tait, I must say that I disagree with Dr. Huntington and with Dr. Park. Where the mistake in the present case may be, one could not say without carefully examining the whole joint, and this was not done. I have had some patients from the country who have come to me for the restoration of the function of the elbow joint after its injury. I have these patients skiagraphed by Dr. Jones, and I have found the skiagraphic picture, as interpreted, disagreed with the clinical diagnosis. Of course these old injuries are rather hard to make out, for they are ankylosed, as a rule, and there are no false points of motion. I have then operated and found still a different condition from that pictured either from the clinical appearance or the skiagraph. But the x-ray plate showed more than I had thought. Of course seeing is the best possible way of ascertaining the actual condition. But there are certain conditions which the x-ray shows and which the sense of touch does not reveal. In regard to the fracture of the neck of the radius reported by Dr. Tait, I think I should have removed the head of the bone. Union is not good, as a rule, in these cases, for the head of the radius, like the head of the femur, is but poorly supplied with blood. Resection of the head, therefore, generally gives a better result than treatment with splints and rest. The malposition almost certain to occur when the head of the bone is allowed to remain causes binding of the bones in certain positions."

Dr. Tait said: "At the time I operated upon this patient union had already commenced, so I concluded not to disturb it."

In reply to the question raised by Dr. Huntington as to tubercular infection of the testis, Dr. Harry M. Sherman said:—"I think we may consider tubercular infection of the testicle somewhat in the same light in which we consider tuberculosis of bone. In bone tuberculosis, about 21 per cent of the cases are of primary invasion; the other 79 per cent are secondary to tuberculosis somewhere else. In Dr. Huntington's case it would be very difficult to say which infection was primary. Glandular infection elsewhere, with broken down tubercular tissue, may have led to the secondary involvement of the testicles. Dr. George Chismore says that it is not wise to interfere with tuberculosis of the testicles, and certainly he has convinced me that if left alone they do remarkably well. I remember one case in particular in which Dr. Chismore stood between the man and an operation, and the man has now lived a thoroughly useful life for many years and is in the best of health."

Dr. Douglass W. Montgomery said:—"In connection with what Dr. Sherman has just said, I would say that I examined a specimen of the discharge from the fistula of the patient referred to by Dr. Sherman about nine years ago. At that time quantities of bacilli were found. Yet the man is alive and well today and there is no indication of any other infection."

Dr. Philip King Brown said:—"There may be a primary infection of the testis, or rather of the epididymis, with infection of the lungs following as a secondary lesion. Tuberculosis of the epididymis is not at all rare, though it is not common. General, or at least pulmonary invasion is very liable to follow any operative measure except complete removal. Curetting of the tuberculosus testicle is very commonly followed by an extension of the disease."

Dr. A. E. Taylor thought that the mathematical chances of the tubercular invasion of the testicles in the case mentioned by Dr. Huntington being one of hematomatous infection, were very small indeed. Here the infection may have been primary or from some primary infection in neighboring tissue, but was probably secondary to a tuberculous infection of the lungs which had remained quiescent for a long time. It is absolutely impossible to tell within a very great range of time, as to the date of a tuberculous infection of the lungs. It may be weeks or months or years old, when examined at the post-mortem.

Dr. Brown referred to a patient recently seen and upon whom he had that morning performed a post-mortem. The man presented a stricture, which for many reasons was at first thought to be a tuberculous stricture. Later the pain subsided, all symptoms disappeared, and the diagnosis was abandoned. He suddenly developed a temperature which ran up to 105° and died on the ninth day thereafter. Post-mortem showed a diffuse miliary tuberculosis, with the primary lesion in the left kidney. It was a very small spot, but was undoubtedly the primary lesion. The lungs were free from all but the acute changes due to such an infection. The testicles were carefully examined and one showed very suspicious hardening. The man gave a history of mumps with accompanying epididymitis, and it is not common for this combination to result in tubercular infection elsewhere, particularly in the lungs."

Dr. Tait:—"The treatment of tuberculous testis and epididymis was very thoroughly discussed in a series of meetings of the Surgical Society of Paris. The great majority favored conservative methods, and this conclusion was arrived at after an extensive trial of the radical method. These same authorities would, however, adopt radical measures in renal tuberculosis."

MEDICO-CHIRURGICAL SOCIETY.

August 7, 1899.

DISCUSSION ON FRACTURES OF THE ELBOW JOINT.

Dr. C. N. Ellinwood, in the Chair.

Dr. L. C. Lane:—I suggested this subject as the one for our discussion, believing it to be one of the most important within the entire domain of surgery. Fractures of the elbow cannot be too well studied and cannot be too well treated. There is some difference of opinion with regard to the method of treatment. I have, after long experience, arrived at a very pronounced opinion or notion in regard to that treatment, of which I will presently speak.

It is not always easy to make a diagnosis of fracture of the elbow. In order to do so it is necessary to recur to the great natural landmarks, which Nature has put there, and which, when learned by the surgeon, will help to guide him. In this fracture there is usually some displacement of the fragments, though not very great. To know that the elbow is deformed, or that we have a fracture accompanied with displacement, the proper plan of procedure is to begin at first on the most prominent point, which can be felt in every elbow of the adult and also in that of some children—the inner condyle. This, in the adult, is very prominent and can be readily felt.

A fact in the anatomy of the elbow which should always be borne in mind is, that there is a great difference between the size of the inner condyle in a child, say four, five or six years of age, and in the adult. In a small child the inner condyle is very small and might deceive one in regard to the position of the rest of the joint.

On the opposite side we have another great landmark—the external condyle. To the outer side muscles are attached, which extend and supinate the forearm. These muscles are factors in the work of displacement.

Another landmark is the head of the radius. In moving the forearm, where the tissues are thick or swollen, you cannot feel it. The head of the radius is on a line with and is in a sense a continuation of the external condyle. By a slight shifting forward or backward we have luxation.

These landmarks or signal points, we might say, indicate to the feeling finger whether things are right or wrong about the elbow joint.

We may have a fracture of the inner condyle or the outer condyle; we may have a fracture near the head of the radius. We may have a fracture of the olecranon. We may have a fracture of the radius immediately below its head. All of these parts when fractured lead to some displacement, but all the landmarks are in reach of the searching finger except this one—the tip of the coronoid process. These points are covered two or three inches deep, and it is very hard to feel through them. The coronoid process is far oftener broken than the books tell you. Some of the older books, published many years ago, report only a small number of such fractures. I am sure it is often broken and often interferes with the final recovery of the joint.

Along with one of these fractures or two of them, we may have luxation. There are ten luxations which may take place at the elbow joint. These complicate our treatment somewhat.

In many cases it is very difficult to make an accurate diagnosis in a case of fracture, but by carefully and studiously touching with the index finger these several points which I mention: inner condyle, external condyle, head of radius, radio-condyloid interspace and olecranon process, by running over these points and verifying the site of every one in turn we will find probably some displacement of one of them. We do not have a great deal of crepitus here. There is usually some crepitus in some of these fractures, but it is not an easy matter to elicit it. You will have to make some movement, and that movement being painful is not easily done. In order to make a complete diagnosis of the fracture it is well to put the patient under an anesthetic. You can learn then everything that is necessary about the joint. If you try to move, or extend, or pronate, the patient will throw himself this way and that. Under anesthesia this will not occur. Very often the surgeon is called to a fracture of both the inner and outer condyles, the two being separated from each other. These conditions may be learned by mutual friction of the fragments and extension of the forearm if the patient is under anesthesia.

REPLACEMENT.

This is not difficult. In fact, as a rule it is easily enough done. The trouble is, however, if you have complicated injury in which the internal and external ligaments are severed, though you reduce them to proper conditions, yet the fragments are very apt to fall asunder, and you have, if you allow them to remain, displaced a bad cure. After I have reduced and immobolized the joint, I have a habit, if there is any doubt in my diagnosis, of taking off the splint at an early time and re-examining and redressing the parts again.

There is one position in which I treat all these fractures except one—that of the coronoid process. After reduction to proper form, I treat them all in *straight position.* I began to do this in 1866. I had learned, by sad experience, that treatment in the flexed position gives bad results. I had a great deal of trouble about one case that passed into the charge of an unfriendly party. After that I studied with a great deal of care and I determined to treat my next case in a *straight position.* That is, whether it be the inner condyle, or the external condyle, or the lower end of the humerus above the condyles or the olecranon process of the ulna, or the radius below its head, to treat them *all in the straight position.* For that purpose I take cotton wadding, make rolls of it and wrap it around the joint and arm so as to make a sofe cushion. As regards a splint, you can use anything you have. Dr. Cooper introduced a tin and leaden splint, which is capable of being molded to the arm. The tin is not very flexible. I use thick pasteboard for treatment of fracture of the arm; if one layer is not enough, have two or three.

These, if dipped in warm water, can be molded to the arm. Place a long one in front, so molded as to include the part well, and something smaller, but similar splint, behind. Hippocrates says we must treat the fracture with the forearm in flexion and let it get well that way, and that is the best you can do. That was the law laid down in anatomy. It is improper to have the arm remain in the flexed position; that is, to get a cure in that position. After the dressing, you take off the splints, whether of tin, of lead, of wood, of felt, pasteboard, or gutta percha, and gently move the forearm. What I put on to-day, to-morrow I take off. I do that with a great deal of care. I take off all the dressing to see if the fragments are in the proper place. I then verify if this depression here and that prominence there are in normal place. Now, these being all right, I take the forearm and flex in this way once. (The speaker illustrated these points with skeleton arm.) I flex it a second time. That is all I want, in order to retain motion. Now taking again the dressing of the forearm in flexion: Suppose I dress in that position. We have a fracture here; in that point it is broken; through there the callous forms. Suppose I make passive motion. I would have a great deal more trouble to overcome that callous deposit.

Again, in regard to the muscularity. The muscles here are torn somewhat, and in the healing process they contract. The arm being fixed in that position and the muscles contracting, you must use a great deal of force in straightening the arm. Again, there is a large artery which is very near this muscle (the brachial artery); there is also the ulnar nerve and the musculo-spiral nerve. These nerves are imbedded in the torn muscles and in the healing process they become fixed and fastened in the new tissue. When you flex and extend, all these buried structures are put under a dangerous stretch, and you may tear them. In the straight position all these several dangers do not obtain. A callous may form. One or two flexions or extensions done every day will force it out of its place and will leave room for the future movement of the arm.

These are the reasons which, to put it briefly, long ago led me, in fractures about the elbow joint, to adopt a straight instead of the flexed position. There are a great number, however, of eminent surgeons who have not adopted it. Several have done so, however, and some of the leaders of the profession are among them. Nicholas Senn dresses in the straight position, and one of the oldest who began dressing that way was Oscar Allis of Philadelphia. John B. Roberts of Philadelphia is equally strong in this opinion.

I adopted it in 1866 and obtained good cures in every case in which I had entire control. There is, however, one fracture which is very troublesome. It gives a great deal of trouble, and those who treat in flexion have more difficulty than those who treat in extension. It is the most difficult of all these several fractures to obtain a faultless cure.

One word more about passive motion. I am sure the thing is too often overdone. The patient is pained by it, and if he is a boy he will struggle and scream. The only way to do is to make the motion very gently but firmly and steadily whether the patient will submit or not. You can give them confidence that the thing will be nearly painlessly done. You can commence on the second day with gentle passive motion. You can bend the arm, one or two, or, at most, three times, once daily, for three of four weeks. According to my experience, there never should be ankylosis from fracture of the elbow joint. By proper management, a movable joint can be obtained. We may not always obtain a flexion to the normal thirty degrees. The ordinary elbow makes an arc of thirty degrees, and we are doing very well if we get a flexion to the extent of forty-five degrees.

I am asked a question by one of my hearers, what I would do if a case came to me which had been treated by some other surgeon. It is a very good thing to send the case back again to the one who treated him without any unfriendly criticism. At least, that is my course. There is nothing that causes more dissatisfaction in the entire domain of surgery than an ill-treated arm, and the young surgeon would always do well to be aided by the counsel of one with large experience.

A few words more about moving the joint. Passive motion should be begun on the day following the first dressing and be kept up deliberately with the co-operation of the patient. Tell the man, woman or child, "It will not hurt you much." The first day he will say it doesn't hurt. The second day he will say it doesn't hurt, or hardly hurts. About the fifth or sixth day he will say it hurts some.

There is often practiced too much passive motion. An important point in connection with that is what Dr. Farnum partly referred to—that in some fractures or in the unossified bones of a child the radiograph will not present the conditions accurately. Callous is not shown by the radiograph. If the picture of the parts be taken soon after the patient is discharged, we will get a picture which will alarm him.

A case came to me not long ago of a boy from Montana, probably eight or ten years of age. His father brought him to consult me in regard to a fractured elbow. I looked at the arm and then said to the father, "What makes you think it is so bad?" "Well, look at this picture," he said. He had consulted a surgeon who had had a radiograph taken. There was a large rent running through the bone as if the parts had not been brought together. The breach which was presented in the radiograph was due to the fact that the callous was not shown. There is an example of one of the difficulties which the surgeon may encounter in a court of justice. The X-rays cannot properly represent the newly formed parts. On examination, you can see a black streak right through the line of fracture. Well, I talked to the father in a pacifying manner, and said, "This doctor has put very bad notions in your head. The new bone cannot be shown with the X-ray, and that is the cause of the imperfect appearance in the radiograph of your boy's elbow." I put him under chloroform and verified that fact. After a good deal of quiet talk, I left him feeling very much better towards his doctor. He said he had come many hundred miles to see me—all on account of that picture.

In passive motion it is very important to hold the elbow with your hand, with fingers on one side and thumb on the other to immobolize the fracture or part that is broken.

Dr. Farnum:—At the present time surgeons differ greatly in opinion as to whether these fractures at the elbow joint should be dressed in the position of flexion at that joint and whether early communicated movement (passive motion) should be used at any time or the joint be completely immobilized until after union of the fracture has occurred. Many of our best surgeons oppose forced or communicated movement at any period of the treatment, depending for restoration of function upon only such active movements as the patient himself will make after union of the fracture has occurred and the dressings have been removed. There are three points in the treatment of fractures about the elbow upon which it would be very disirable to have a record of the opinions of all skilled surgeons: 1st. Whether fractures just above and at or between the condyles of the humerus should be dressed with the arm in extension or flexion. 2d. Whether complete immobilization or passive motion should be used before complete union of the fracture: and 3d. If passive motion is used at all, at what time it should be commenced, the anatomical and pathological reasons for each one's plan of treatment being, of course, expressed. Such opinions in print could be cited as authority when a surgeon is unjustly censured for not having used in a particular case one of these plans of treatment instead of another, especially when such censure is given in the form of adverse testimony in a court of justice during the prosecution of a surgeon for an unfavorable and perhaps unavoidable result after treatment of one of these fractures. Fortunately, however, a good result in these fractures is nearly always obtained by either of these methods of treatment used by a careful surgeon who is familiar with the treatment of fractures. For this reason an agreement as to one method as best for most of such fractures cannot be expected. But an agreement by surgeons as to the best method of treatment to be recommended for use by those who are not skillful surgeons would be very desirable. Such fractures will frequently be treated by practitioners of medicine who are not specially trained in the treatment of fractures, and, if possible, a plan of treatment as best for such to adopt should be agreed upon.

The reasons enumerated by Dr. Lane for opposing the flexed position, supplemented by his experience during the last thirty-five years in treating with uniform success as to restoration of function all of his cases of fractures of the condyles and lower end of the humerus in the extended position, certainly argue very strongly, if not sufficiently, in favor of the extended position. In addition to these points of objection to the flexed position,—namely, the filling of the large olecranon fossa with callous when the arm is maintained in flexion, the plication of the anterior muscular and fibrous structures of the joint during flexion, the greater volume of muscular and fibrous tissue on the front than on the back of the elbow joint, forcing adhesion of plicated structures to important vessels and nerves in front, thus endangering these structures from stretching during acts of subsequent movement, Dr. O. H. Allis gives another most important objection, the uncertainty of preserving in any position other than the extended one what he designates as the "carrying function," i. e., the normal divergent angle of about ten degrees during extension at the elbow. In the flexed position during treatment of these fractures, we can never be sure of preserving this angle, for it has been shown that in fractures involving the inner condyle of the humerus an ascent of the inner condyle to the extent of only about one-eighth of an inch, undiscernible during flexion, is sufficient to destroy this angle of divergence. I might add that another most important reason in favor of dressing in the extended position is the fact that during extension we can much more easily examine and ascertain whether the displaced fragments have been restored to normal relations of joint surfaces and also ascertain at subsequent redressing and examination whether such normal relations have been retained by our dressings. Slight redisplacement of fragments subsequent to the first dressing cannot be easily made out while the arm is flexed. Having dressed all of my cases of fracture of the humerus involving the elbow joint in the position of extension during the last twenty years of my practice, excepting one dressed in flexion, having obtained good results in all of them, and believing that good anatomical and pathological reasoning favors the adoption of the extended position in preference to the flexed position, I firmly believe that all fractures of the elbow joint can be best treated with the arm in extension, and that in this position displaced fragments can be so retained in proper relations to each other that one need not in any case fear ankylosis to the extent of more than a very slight disability from diminution of function.

However, if displacement of fragments is overcome and the normal relations of the joint surfaces to each other is maintained during treatment of these fractures involving the elbow joint, perfect functional results will follow whether we treat in the extended or the flexed position and whether we do or do not use passive motion. The position in which redisplacement of fragments can be the more easily prevented and the more readily and certainly detected, is the one in which the fracture should be dressed. The most frequent objection to the extended position is, that if the arm become ankylosed or suffers a considerable degree of limitation of motion at the elbow, it will be much less useful than in the flexed position. The answer to this objection has just been given by the statement that subsequent restriction to joint motion will not result and need not be expected or even feared if the displaced fragments are restored to normal relations of joint surfaces.

The question of passive motion, or communicated movement, is one upon which our best surgeons differ in opinion. Whether the plan of treatment is by immobilization until after union of fracture has occurred and with only active movements made thereafter by the patient himself, or by communicated movement begun early or at a comparatively late period during the treatment, it is probable that the same satisfactory result will follow in all or at least nearly all cases in which the fragments have been so reduced and retained as to preserve this normal relation of joint surfaces. However, the opponents of communicated movement, who favor immobilization, argue that the best method of treating separated bone or soft tissues to be repaired is by rest and nonseparation of surfaces, that the communicated movement produces an irritation which in some cases leads to an excessive formation of callous or new bone, to excessive thickness of capsule overlying soft tissues, which may remain permanent or result in adhesions or even in ossification of ligaments and capsule. Personal experience with my own cases and observation during a period of ten years of many cases treated by Dr. Lane has convinced me that communicated movement, when properly made, will not produce such results as charged against it by its opponents. In fact, I have myself treated several cases of fracture involving the elbow joint, and have seen treated, by Dr. Lane and others, several that appeared to owe in great part their complete recovery and restoration to function to the passive motion. In many cases of badly fractured condyles of the humerus, in which the swelling is considerable and remains for several days, it is very difficult at subsequent redressing to determine whether the fragments have remained in good relation of joint surfaces, especially when some motion is not made at the joint. With easy motion at the joint, very slow and gradual and in proper direction, without appreciable separation of fragments so held as to be maintained in good relation, the joint can be carried through a portion of its arc of motion without, I think, the ill results charged against it and with the advantage of continuing to preserve a portion of the normal range of motion. I believe, as Dr. Lane has just remarked, that the communicated movement should be commenced early,—as early as the second or third day after the injury. Experience has taught me that if motion is not begun early, it becomes each day more and more difficult, the joint becoming more and more rigid, until the surgeon may be compelled to desist on account of excessive pain produced and the violence required. If the communicated movement is not begun until after the fracture has quite strongly united, it cannot be of much benefit, and will probably not in any case accomplish much if any more than massage and active movements by the patient himself.

Although experience with early communicated movement has influenced me to form the opinion that it will not produce in any case the results charged against it by advocates of complete immobilization and has influenced me to believe that in some cases of fractures at the elbow joint good results would not be attained without it. Yet I must confess that in the few favorable cases that I have treated with immobilization the results have been equally good, in all cases in which I could feel sure that the fragments of bone would be retained in normal relations of joint surfaces during immobilization, in these and only these cases would I feel safe in treating without early communicated movement.

Dr. Somers:—" I have very little to add in reference to the subject except that it seems to me that the action of the joint and the anatomy of the joint show very clearly that the straight position is the most satisfactory and practical one for the treatment of fracture of the elbow.

" In the course of three or four years' experience in the Receiving Hospital here, I had the opportunity of examining and giving at least first treatment, to a very large number of injuries about the elbow; and I never approached any of these cases without feeling a great deal of worriment and uncertainty about the actual condition—that is the diagnosis and prognosis. In diagnosis, I soon formulated a fixed plan of procedure, and the first thing that I learned, was that it was almost useless to diagnose or attempt to diagnose such a case without placing the patient under an anesthetic. That was the first thing I carried out—the anesthetizing of the patient. The next point was the diagnosis; and in making my diagnosis, I was always very careful to examine the sound elbow and familiarize myself with that side of the body, and to find all the land marks, and then, when the patient was thoroughly under the anesthetic look for the corresponding land marks on the other side. The land mark I looked for first, as a rule, was the head of the radius, always attempting to get the rotation at that joint. In my practical experience I have seen cases where dislocation had been overlooked, and dislocation of the radius produces one of the most serious complications of fractures of the elbow joint.

"A case which stuck me strongly was one which I saw at the surgical clinic. It had been treated in the rectangular position. After the swelling had subsided it was found that the head of the radius was over against the inner condyle crossing the coronoid process, and this condition of things was not discovered for sometime after the injury had occurred; and the reason it was not discovered was, first, on account of the swelling which entirely obscured the land mark, and, second, the putting up of the injury in the flexed position.

"A year and a half or two years ago, at the request of the late Dr. Plummer, I made quite a number of measurements of the forearm of students here at the College, in order to determine the angle of deflection of the upper arm with the forearm I found it varied greatly; in some students it was as much as 25 degrees, and in other, the angle was not more than 5 or 6 degrees. The average of all I took made an angle of about 12 degrees. Now this varies a little on the two sides of the body, but practically not to any great extent. In the extended position we are able to compare the right arm with the left arm and get this angle of deflection very nearly to correspond on both sides, which is quite an important feature in the treatment of the case.

"Just one more point about the putting up of these fractures. My routine treatment was to take a thin piece of paste board, the length of the arm and pad it well with cotton, lay the arm upon it and then reduce the fracture as well as I could while it lay upon this splint and compare with the other side. As a proper splint I generally used a piece of card board, paste board, thoroughly soaked in hot water so as to render it pliable. Then in a day or so, the upper splint was removed, and with the hand grasping the arm just above the elbow, to steady the fragments I raised the arm to a right angle once, very slowly, very gently, and then back to the straight position again. This passive motion I carried out every day or so, thinking it was sufficient to break up anything in the line of adhesions that might form. I did not realize any motion between the fragments themselves would produce a large amount of callus, because that point was very carefully studied out by Hamilton, who showed that provided the ends of the fragments remain in contact, passive motion does not delay or prevent their union, and does not to any great extent produce callus. Of course if there is a gliding or sliding motion between the ends of the fragments callus will be produced, but within moderate limits a certain amount of motion between fragments does not interfere with the course of bony union."

Dr. Carpenter:—"I wish to call your attention to one point in the diagnosis of these fractures, which has evidently been overlooked. In as much as Dr. Farnum has called attention to the unity of the profession in the courts I also think it is very essential that we all agree in regard to some one form of treatment for this class of fractures."

Dr. Griffin:—"I would like to ask Dr. Lane what course to pursue, when a case of fractured elbow with bad result already obtained, presents itself. There is the olecranon fossa filled with callus; there is bony ankylosis; there are contractures of the muscles of the arm—what is to be done?"

Dr. Finney:—"I begin passive motion on the second day and keep it up every day until the case is discharged."

ALAMEDA COUNTY MEDICAL SOCIETY.

September, 1899.

A paper on "PLEURITIS" or "PLEURISY" by the late Dr. J. S. Adams was read by Dr. A. H. Platt.

Dr. G. L. Eaton read a paper entitled "RACHITIS." (See page ..)

Dr. D. D. Crowley:—"The bones should not be operated upon while soft. Instead use pressure and support to overcome existing deformities, or simply support to prevent the same. The earlier mechanical interference is resorted to the better. If the disease terminates favorably rapid ossification follows and the bones become unusually firm and strong. The ossification is so rapid and universal that the bones do not afterward elongate, and hence the dwarfish stature of so many afflicted with rachitis. Dr. Bell, of Edinburgh, uses a thin sharp chisel, first incising the skin and soft tissues with it, parallel to the shaft. On reaching the bone he turns the chisel and drives it into the bone transversely. He divides the bone about three-fourths of its diameter and with a little force fractures the remainder. After overcoming the deformity, plaster of paris can be used. The chipped incision is practically aseptic, as there is only a small logitudinal skin wound to be seen."

Dr. J. L. Milton:—"I think the first is a case of congenital syphilis. The Hutchinson teeth, their late appearance and their decay all point to that diagnosis. In rickets the teeth may appear late, but they do not decay. We are apt to think only of bone, but rachitis means destruction of the whole body, heart, teeth, muscles and nerves.

"The most important treatment is a proper selection of food. The child may be fed on milk that is too rich which may set up a diarrhea. Give older children cod liver oil, potatoes and beef juice. Do not operate too soon, not before the child is 5 years old. Prevent their walking. Use massage. It aids nutrition. Rachitic children often suffer from catarrh and have adenoid growths. They are apt to have convulsions and spasm of the glottis."

Dr. Eleanor Stow:—"In enumerating the deformities there is one Dr. Eaton did not mention. As well as lateral curvature of the spine there is frequently a kyphos in the lower dorsal or lumbar regions, which is differentiated from Pott's by the lack of rigidity. Rachitic and tubercular deformities often occur together."

Dr. Buteau:—"I want to ask if there is not a difference between ossification and calcification. The latter is a deposition of lime salts, and is mechanical, while the former is a vital process."

REMARKS ON THE PATHOLOGY OF RICKETS.

Dr. C. H. Rowe:—"The main pathological charged against it by its opponents. In fact, changes in rickets are in the long bones, and occur at the period of their most rapid growth; and so we must remember before taking up the pathology that the long bones grow in length by the production of cartilage between the epiphysis and the shaft; that the shaft grows in thickness by the production of bone beneath the inner layer of the periosteum, and that the medullary canal is continually increasing in size by the absorption of the inner layers of bone. In rickets there is an exaggerated production of cartilage at the epiphysis, and an excessive cellular growth beneath the periosteum, while the process of ossification in these tissues progresses slowly, imperfectly, or entirely ceases. At the same time the absorption of the layers about the medullary canal goes on more rapidly than normal. As in health the growth of bone in length is much more rapid than its increase in diameter, owing to the greater activity of the changes taking place at the epiphysis, so in rickets it is at the extremities of the long bones that the most marked changes ar seen.

"In a longitudinal section of a long bone, the principal change seen at the extremity is that the cartilaginous layer, which unites the epiphysis and the shaft is very much enlarged both in width and thickness. This cartilaginous area is of a bluish color and rather softer than normal cartilage. There is not the distinct line of separation between cartilage and bone as is normal, but on the one side the cartilage blends with the cartilage of the epiphysis, and on the other it sends processes into the shaft and in the calcified areas these are irregular and scattered. In the shaft the outer layers of bone are soft, the deeper layers are firmer, while the deepest ones may be completely calcified. The medullary canal is much more vascular than normal, its contents resembling granulation tissue.

"The chemical analysis shows a marked diminution in the calcareous salts, which may be as low as 25 per cent or 35 per cent.

"Kassowitz, the leading authority on the anatomy of rickets, regards the hyperemia of the periosteum, marrow, cartilage, and of the bone itself as the primary lesion, out of which all the others develop. This disturbs the normal development of the growing bone and excites changes in the bone already formed. The cartilage cells in consequence proliferate the matrix becomes softer and as a result the bone, which is formed from this unhealthy cartilage is lacking in firmness and solidity. In the bone already formed the excessive vascularity favors the normal process of absorption. Kassowitz seems to have proved by experiment that hyperemia of the bone results in defective deposition of lime salts."

Dr. R. L. Stratton:—"I regard the bone lesions of rachitis as the local manifestation of a systemic condition. The delayed ossification, of which it is the most prominent feature, shows itself also in the fractures of bones in children afflicted with this disease. Fractures might occur with less violence in these children than in a healthy child."

Dr. Stratton then narrated the case of a rachitic infant, who only rolled off a sofa of the ordinary height, and sustained a fracture of the femur. Union took place very slowly, and what, in the ordinary child, would have been accomplished in three weeks or so, took ten or twelve, and was only then effected by so adapting the treatment as to permit the child to be placed out of doors, and in every way improving its hygiene.

Dr. Burchard:—"Rachitic children are always very nervous. They do not want to be handled. Another noticeable symptom is perspiring about the head. I have also found in most cases of rachitic children that during the greater part of their fetal life the mother's urine is loaded with albumen."

Tabes Dorsalis

Dr. Adamkiewicz (*Berliner klin. Wochenschrift,* June 5, 1899) makes the following classification of tabes, according to the etiology: (1) Idiopathic, the usual and most frequent form, of unknown origin and incurable, resulting from a primary parenchymatous degeneration of the posterior column, and attended with progressive ataxia and grossly preserved muscular vigor. (2) Traumatic tabes, differing from the former only in its origin in trauma and the stability of symptoms. It is also incurable. (3) Syphilitic tabes, due to change in the vessels of the posterior columns of the cord, which are peculiarly susceptible to syphilitic changes. This variety is subdivided into two forms: acute, due to endarteritic processes, and curable; and chronic, dependent upon sclerotic processes in the posterior column, and hence incurable.

LICENSES GRANTED.

August 1, 1899.

At a meeting of the Board of Examiners of the Medical Society of the State of California, held on the above date, the following certificates were granted:

Andrus, Nancy Louisa, Riverside. Toledo Medical College, O., March 9, '87.

Blitz, Adolph, Los Angeles. Cincinnati Col. Med. and Surg., O., Feb. 17, '73.

Clark, Nellie L., Clovis. Omaha Medical College, Neb., April 22, '98.

Clark, Thomas J., Bartlett Springs. Med. Dept. Univ. of California, May 16, '99.

Clark, Tracy R., Clovis. Missouri Medical College, Mo., March 4, '80.

Dickerson, James H., Los Angeles. Missouri Medical College, Mo., April 18, '99.

Donnell, Theophilus C., Los Angeles. Indiana Medical College, Ind., Feb. 28, '79.

Follis, R. H., Jr., San Francisco. Med. Dept. Johns Hopkins Univ. Med., June 13, '99.

Gardner, Samuel James, San Francisco. Med. Dept. Univ. of California, May 16, '99.

Maulhardt, Adolph A., Santa Barbara. Med. Dept. Harvard Univ., Mass., June 30, '97.

McKinnon, G. W. (lien certificate), Arcata. McGill Univ. Montreal, Canada, March 31, '88.

McNaught, Harvard Young, Los Angeles. Trinity University, Toronto, Canada, April 7, '97.

Morgan, James T. (lien certificate), Marshall, Iowa. Col. Phys. and Surg., Keokuk, Iowa, Feb. 13, '77.

Newcomb, Arthur T., Pasadena, Baltimore Medical College, Md., March 30, '93.

Reed, W. Boardman, Philadelphia, Pa., Med. Dept. Univ. of Pennsylvania, March 15, '78.

Tolsom, Benjamin F., Chicago, Ill. Jefferson Medical College, Pa., March 9, '72.

San Francisco, September 5, 1899.

5287. Arthur, Samuel Richard, Stockton, Med. Dept. Univ. of California, May 16, '99.

5288. Browne, George C., Benicia, Coll. Phys. and Surg., Baltimore, Md., April 12, '99.

5289. Bruner, Francis M., Santa Ana, Bellevue Hosp. Med. Coll., N. Y., Mar. 10, '90.

5290. Edwards, Carrie H., San Jose, Mich. Coll. Med. and Surg., Mich., Mar. 24, '98.

5291. Garrett, Edward H., Los Angeles, Coll. Med. Univ. Southern California, June 16, '99.

5292. Graham, George R. M., Tacoma, Wash., Kings and Queens Coll. Phys., Ire., June 8, '83.

5293. Holmes, James F., San Francisco, Coll. Phys. and Surg., N. Y., June 12, '95.

5294. Hosford, Edwin Thomas, Manti, Utah, Keokuk Medical College, Iowa, Mar. 7, '93.

5295. Hosford, William J., Manti, Utah, Med. Dept. Univ. of Colorado, May 27, '90.

5296. Little, Eugenia G., Portland, Or., Med. Dept. Univ of Oregon, April 3, '99.

5297. Magee, Chester Lea, San Diego, Med. Dept. Johns Hopkins Univ., Md., June 13, '99.

5298. Marshall, Norman B., Cordona, Ill., Jefferson Medical College, Pa., April 2, '83.

5299. Merritt, Frank Denton, Needles, Coll. of Phys. and Surg., N. Y., June 14, '93.

5300. Osborne, Aaron S., San Diego, Long Island Coll. Hosp., N. Y., June 26, '73.

5301. Parseghian, Jacob H., Fresno, Coll. of Phys. and Surg., N. Y., Oct. 21, '95.

5302. Quint, Sumner J., Los Angeles, Coll. Med. Univ. Southern California, June 16, '99.

5303. Riley, J. Harrison, San Francisco, Louisville Medical College, Ky., Mar. 25, '98.

5304. Snyder, Sharps M., Bridgeton, N. J., Med. Dept. Univ. of Pennsylvania, Mar. 12, '65.

5305. Sulgbacher, Carl I., Kansas City, Mo., Med. Dept. State Univ., Mo., Mar. 28, '99.

The following are graduates of Med. Dept., Univ. of Vermont:

(*Continued next number.*)

VITAL SCIENCE. Based upon Life's Great Law, the Analogue of Gravitation. By Robert Walter, M. D. J. B. Lippincott Company, Philadelphia, 1899. Price, $1.50.

Dr. Robert Walter of Walter's Park, Pa., has published a volume entitled "Vital Science." The author is not a firm believer in the efficacy of medicinal agents, but rather favors proprylaxis, hygiene and vis medicatrix nature. The book seems to us to be a heterogeneous assortment of homeopathy, scriptural texts and amateur philosophy.

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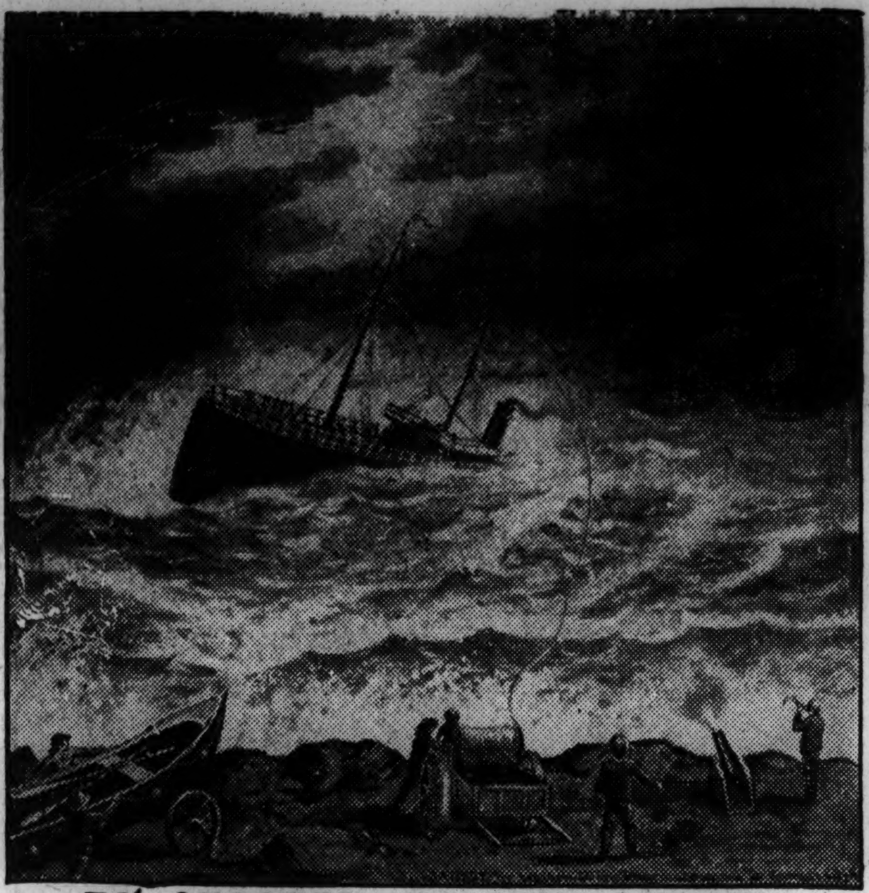

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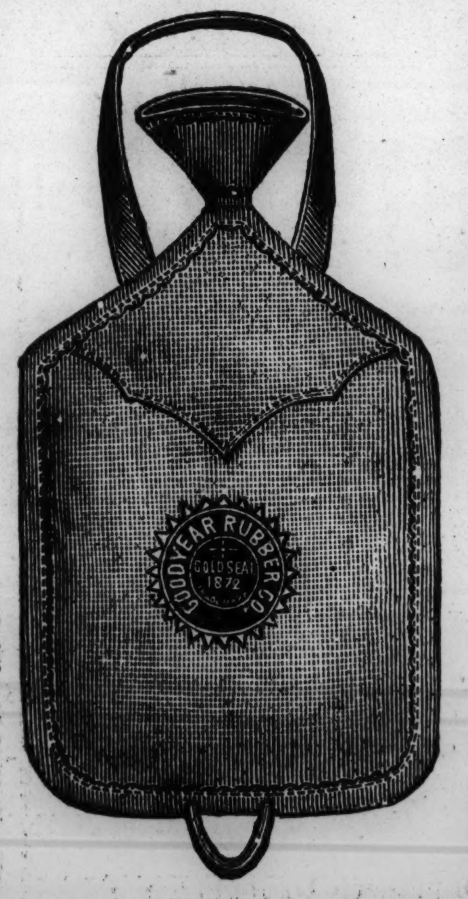

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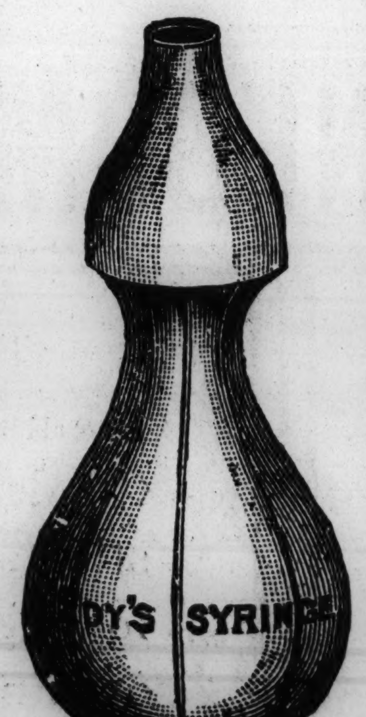

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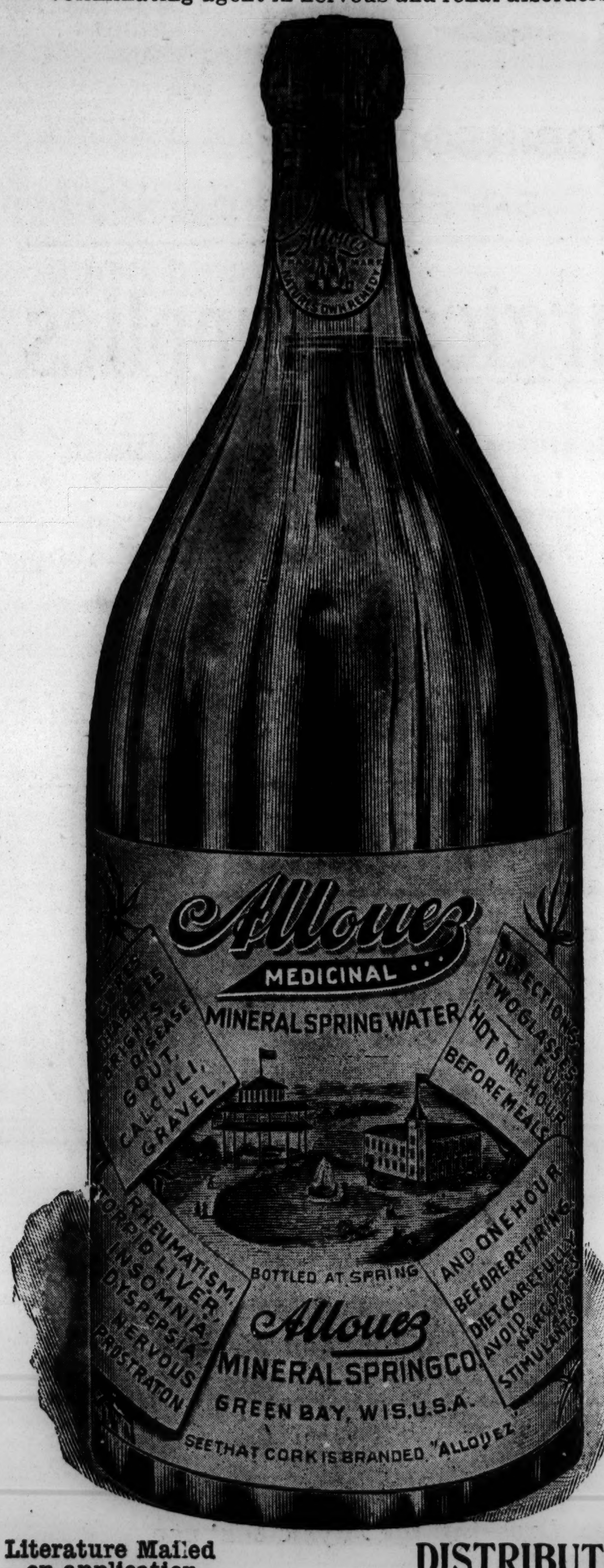

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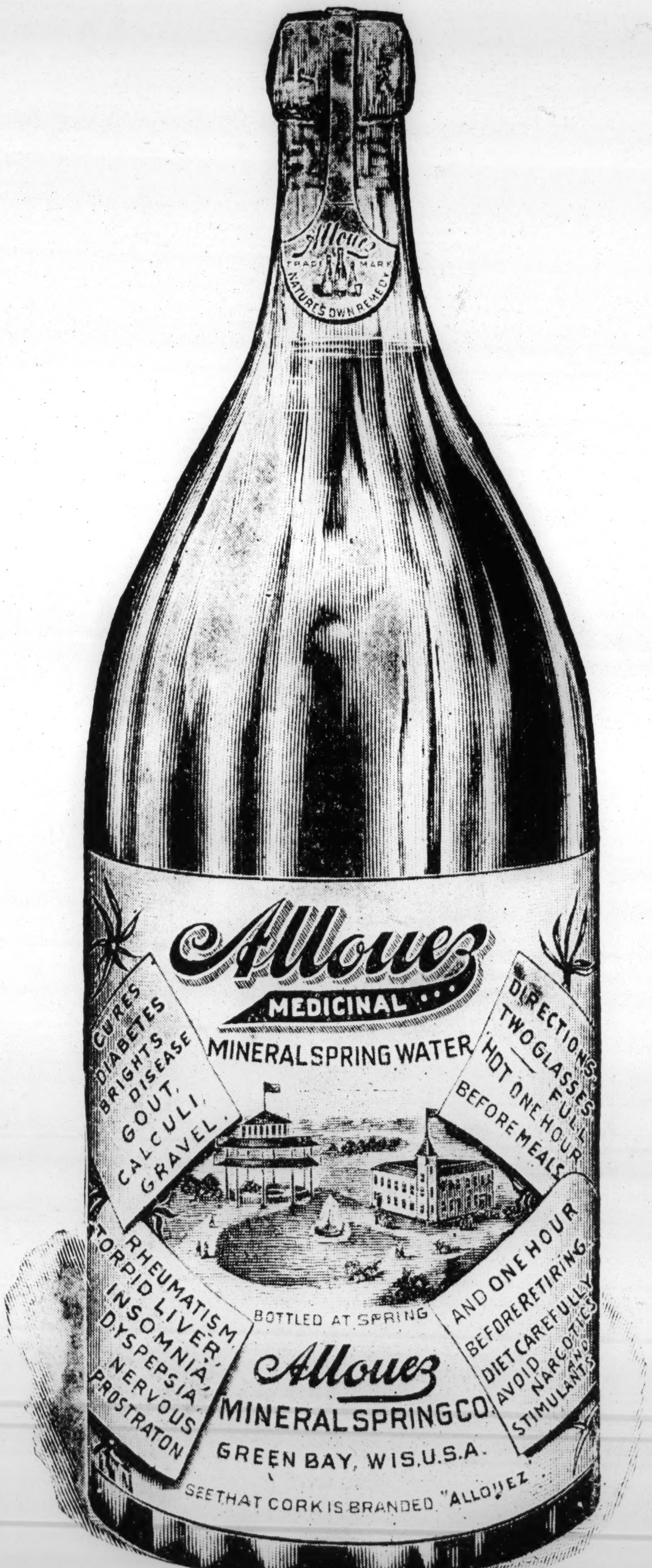
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"The urine was heavily loaded with albumen, tube casts, and broken-down tissue, having a specific gravity of 1008, and excretion amounted only to 6 to 8 ounces in twenty-four hours. After a few days' use of the water the passage of the urine increased rapidly to 90 ounces in twenty-four hours, with a specific gravity of 1014. The urine gradually became clearer, and in about two weeks the quantity passed in twenty-four hours decreased from 90 to 30 ounces, and specific gravity became normal. Two months afterward the microscope revealed neither tube casts nor blood.

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